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THESIS

MANAGEMENT CONTROL OF
FLIGHT OPERATIONS (OFC-01) FUNDS

by

Robert N. Burton Jr.

December 1982

Thesis Advisors: K. J. Euske
J. F. Mullane

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described in the research included the administration and flow of OFC-01 funds, the Budget OPTAR Report, and the Navy Flying Hour Program.

The conclusions contained in this thesis provide an evaluation of the strengths and weaknesses of the OFC-01 management control system. Strengths include a well developed information system, an established financial structure, and a strong structural organization. Weaknesses include a flow of funds that does not follow the operational chain of command and a lack of formal feedback from CNAP to the squadron level. Specific recommendations are provided to improve the management control of OFC-01 funds.

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Management Control of Flight Operations (OFC-01) Funds

by

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Lieutenant Commander, United States Navy
B.S., United States Naval Academy, 1970

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

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ABSTRACT

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I. INTRODUCTION

A. BACKGROUND

Within the Department of the Navy operating force structure, the Commander, Naval Air Forces, United States Pacific Fleet (CNAP) and the Commander, Naval Air Forces, United States Atlantic Fleet (CNAL) serve as aviation Type Commanders (TYCOMs). Their primary mission is to train and support aviation forces (including Marine air forces) in order to fulfill the operational requirements of their respective superior Fleet Commanders. The budgeted cost of each aviation TYCOM to provide that support for fiscal year 1982 (FY 82) is in excess of $1 billion.

The funds utilized by CNAP and CNAL to support their various aviation and other supported units are provided by their respective superior Fleet Commanders, that is the Commander-in-Chief, United States Pacific Fleet (CINCPACFLT) and the Commander-in-Chief, United States Atlantic Fleet (CINCLANTFLT). CNAP and CNAL are expense limitation holders for the funds they receive and maintain legal responsibility under Section 3679, Revised Statutes, for the largest portion of their budgets. Both Type Commanders issue Operating Budgets (OBs) to themselves in order to finance headquarters staff and other centrally administered costs such as ship and squadron operations and temporary additional duty. Naval air stations and shore activities under CNAP's and CNAL's administrative command are granted separate OBs for base operations and are issued reimbursable orders for Flight Operations funds.

Air stations and shore activities manage their funds in accordance with the guidance provided in Financial Management of Resources (Departmental and Field Activities) (NAVSO P-3006). The operating forces are guided by Financial Management of Resources (Operating Forces) (NAVSO P-3013). Additional financial management and information systems guidance is provided by the Chief of Naval Operations (CNO) and CINCPACFLT/CINCLANTFLT. The guidance provided for the management of resources for operating units (departmental and field activities and operating forces) provides:

> (1) monetary and quantitative information that will enable managers to effectively and efficiently manage resources made available;
>
> (2) operating budget grantors and other levels of management that degree of information necessary for effective coordination and control of resources; and
>
> (3) for the determination of the cost of operations of an activity in terms of the total resources consumed or applied. (NAVSO P-3006, 1975, p.1-3)

To facilitate the management and accumulation of cost data based on the nature of an expense, funding for operating forces is divided, in part, into OPTAR Functional Categories (OFCs). Examples of OFCs are OFC-01 - Flight Operations and OFC-50 - Aviation Fleet Maintenance. The OFCs are further stratified by Fund Code. Fund Codes are two-digit codes (e.g., 7B, 7F, 9J) relating to a Five Year Defense Program and the appropriate expense element (COMNAVAIRLANTINST 7310.1Q, 1980, p.II-2).

Flight Operations (OFC-01) funds are those funds, and costs, associated with the operation of aircraft. OFC-01 funds are provided to support petroleum, oil and lubricants (POL), and other flight operations requirements. Management of those funds is the responsibility of the Staffs at CNAP and CNAL. To ensure adherence to CNO financial guidance, the CNAP and CNAL Staffs continuously review budget performance, both by activity and by funding category.

They submit monthly reports on the status of Flight Operations costs to CNO (OP 51C). The reported Flight Operations information, along with related information on Aviation Fleet Maintenance (AFM) funds, is used..."in CNO to monitor Flying Hour Program execution, to generate a factor input for future programs and to respond to high level inquiries and await reviews. It is of utmost importance that it be accurate and timely" (OPNAVINST 7310.1D, 1980, p.3). The information used in CNO to monitor the Flying Hour Program (FHP) by reviewing the monthly Flying Hour Cost Report (FHCR), is taken from the Budget OPTAR Reports (BORs) submitted to CNAP and CNAL by aviation units with Operating Targets (OPTARs).

The BOR is categorized by OFC with a separate report for each OFC and further stratified by fund code. The OFC-01 BOR reports the following information required for the proper management of Flight Operations funds:

(1) cumulative obligations,

(2) hours flown during the month by applicable aircraft type equipment code (TEC),

(3) cumulative flight hours flown for the fiscal year to date (FYTD) by applicable TEC, and

(4) gallons of fuel consumed during the report month.

Because of the BOR's importance in the financial management control system for Flight Operations (OFC-01) funds, the accuracy of the flight operations information on the BOR is critical in supporting a successful Flying Hour Program (FHP). However, based on discussions with CNAP Staff personnel, it appears that the information provided to CNO does not totally meet the stated criterion of accuracy.

This poses at least two important questions:

(1) What is the impetus for Squadron Commanders to compare squadron performance with the CNO budgeted cost per hour ?

(2) What can be done to ensure correct fuel consumption data?

This thesis takes a critical look at these two questions by investigating the CNAP management control system for OFC-01 funds.

B. SCOPE

This thesis reviews the management control of Flight Operations (OFC-01) funds at CNAP. The FY-82 CNAP budget calls for the expenditure of $522 million for Flight Operations support. Combined with the Aviation Fleet Maintenance (AFM) budget of nearly $200 million, direct aircraft support costs account for approximately 66.8 percent of CNAP's annual budget. Thus, effective management of these funds is crucial to the proper allocation and utilization of CNAP resources.

Although very much related, an analysis of the management control of AFM funds is not within the scope of this thesis. Since OFC-01 and AFM costs are combined to produce direct aircraft support costs (e.g., total cost per flying hour), there are many common problems in their management control systems. For a review of the management control system for AFM funds the reader is invited to see the NPS theses on the subject by Reily and Sheppard (1980) and Bozin (1981).

C. OBJECTIVES

Relating to the questions posed, the specific objectives of the thesis are:

(1) To develop, from the accounting and related literature, a management control model;

(2) To describe the management control system for Flight Operations (OFC-01) funds used by the Staff, CNAP;

(3) To compare the control system presently utilized at CNAP to the model developed from the accounting and related literature; and

(4) To provide conclusions and recommendations based on that comparison.

D. METHODOLOGY

The thesis contains the information necessary to develop a complete description of the management control system for Flight Operations (OFC-01) funds at the Headquarters, CNAP and to develop a valid management control model based on the accounting and related literature. The information collected and reviewed included current Navy instructions and directives pertaining to Flight Operations (OFC-01) funds, management control literature, and previous studies of Type Commander funds accounting and management, particularly the theses on the management control of Aviation Fleet Maintenance funds by Reily and Sheppard (1980) and Bozin (1981). Visits to the Headquarters, CNAP and oral and written correspondence with CNO, CNAP, and CNAL Staff personnel were vital to the information collection process and provided immeasurable assistance in reviewing the current instructions, policies and procedures.

E. ORGANIZATION

The thesis is divided into five chapters.

Chapter One provides an introduction to the organizational structure of the aviation Type Commanders, a brief explanation of the importance of valid flight operations information, the scope to the thesis, the objectives of the thesis, and the methodology used in writing the thesis.

Chapter Two attempts to develop an acceptable management control model based in the accounting and related management literature. Management control is defined, the characteristics of control in organizations are discussed, and the necessity for adequate management control in the effective and efficient use of resources is demonstrated.

Chapter Three describes the management control system for Flight Operations (OFC-01) funds used by the Staff, Commander, Naval Air Forces, United States Pacific Fleet (CNAP).

Chapter Four provides comparisons between the management control sytem developed in the model and the management control system for OFC-01 used by the Staff, CNAP.

Chapter Five presents conclusions drawn from the comparisons made, the strengths and weaknesses of the CNAP management control system for OFC-01 funds, and recommendations to improve the management control of OFC-01 funds. Finally, the chapter indicates two areas for possible future study.

II. MANAGEMENT CONTROL MODEL

A. INTRODUCTION

1. General

The purpose of this chapter is to develop a management control model based in the accounting and related literature. The model developed is only one representation of a management control system. As Euske has pointed out:

> There is no definitive model of management control. Why? One reason is that the theory upon which all of the models are based is weak. Any particular element or relationship could be questioned and possibly diagrammed differently, because there are competing explanations for what happens (1982, p.5).

The chapter consists of three parts. First, management control is defined and its importance in organizations is explained. Part two discusses the concept of control and identifies various characteristics of management control systems. Finally, management control in organizations is discussed in detail. Specific items covered include design of control systems, goals and objectives, measurement devices, and performance monitoring and appraisal.

2. Management Control

a. Management Control Defined

Management control as it is known today has its roots in the scientific management movement of the late nineteenth and early twentieth centuries (Houck, 1979). The major emphasis in management control is on efficient and effective use of resources. As Anthony and Herzlinger point out..."management control is the process by which management assures that the organization carries out its strategies

effectively and efficiently" (1980, p.3). It focuses on the planning and conduct of functional activities and..."addresses itself to the pragmatic planning and evaluation of functional operations with the specific objective of establishing and maintaining efficient conduct of interrelated activities of an organization and...effectiveness of resources based on clearly established standards and guidelines" (Houck, 1979, p.211).

b. The Need For Management Control

There are at least four key reasons for management control in organizations.

First, in carrying out its work, management must make choices or decisions. To contribute to good decision making the information and control system must get the right information, in an understandable form and amount, to the individual or individuals who need it (Lawler and Rhode, 1976).

Second, coordinating and controlling the activities of members of organizations are difficult tasks. Coordinating those activities inevitably leads to some type of control (Lawler and Rhode, 1976).

Third, management must have reports for its own use and it must generate reports for outside parties (Anthony and Herzlinger, 1980).

Finally, management must do what it can to assure that resources are used efficiently and effectively (Anthony and Herzlinger, 1980).

B. CONCEPT OF CONTROL

1. Definition of Control

Control has been variously defined as :

(1) the process by which management assures that resources are acquired and utilized to accomplish organizational goals (Anthony and Herzlinger, 1980);

(2) the monitoring of plans and pinpointing of significant deviations from them (Bobulinski, 1981);

(3) the methods and procedures which ensure the efficient and effective use of all resources (input) in relation to mission performance (output) (NAVSO P-3006-1, 1975);

(4) the process of trying to achieve conformity between goals and objectives (Copeland and Dascher, 1974); and

(5) The rules and repetitive porcedures that provide for data accumulation and communication aimed at facilitating decision making (Horngren, 1977).

The common element in these and other definitions of control is a decision making process that supports the efficient and effective use of resources.

2. Control System Characteristics

A review of the literature indicates that to sucsessfully implement a given course of action and to effectively use the resulting feedback, a management control system must have at least four important characteristics.

First, any control system has at least five essential elements:

(1) an information system that records the progress of an activity,

(2) a structural organization element to which the activity is assigned,

(3) a formal reporting document for generating "feedback" to the organization unit,

(4) a planned or predetermined activity measure against which actual achievement measures can be compared, and

(5) a decision making capability that exists within the organization unit to take action that will bring the achievement level in line with the planned level (Houck, 1979, p.3).

Second, a formal management control system is a total system in the sense that it embraces all aspects of the organization's operation (Anthony and Herzlinger, 1980). As Amey points out,

> A system...behaves as a whole, the changes in every element are dependent on all the others....You cannot sum up the behavior of the whole from the isolated parts...you have to take into account the relations between the various subordinated systems and the systems which are super-ordinated to them in order to understand the behavior of the parts (1979, p.63).

Third, control systems help provide goal congruence and incentive through the use of technical tools (e.g., budgets, standards, formal measures of performance) that provide information and feedback (Horngren, 1977). Lawler and Rhode would call this "influencing behavior"; a crucial aspect of any control system (1976, p.6).

Finally, management control systems are built around a financial structure; that is, resources are expressed in monetary units (Anthony and Herzlinger, 1980). Anthony and Herzlinger write:

> Money is the only common denominator by means of which the heterogenous elements of resources can be combined and compared....The accounting system provides a unifying core to which other types of information can be related (1980, p.18).

From the four control system characteristics, it can be seen that management control systems are concerned with the organization as a whole. The focus of the management control system is on using some abstract form of reality such as financial information as a common denominator in establishing goals, monitoring performance, measuring performance, rewarding satisfactory performance, and revising the initial goals and plans.

C. MANAGEMENT CONTROL IN ORGANIZATIONS

1. General

Management control in organizations is an organization-wide effort. Euske states:

> Management control deals with a limited number of variables that tend to be internal to the organization. Also, the variables are related to a relatively well-defined set of predictable problems or situations....The primary involvement in management control is by line managers and top management. They are the individuals whose performance is measured by the management control system. The line managers are also the individuals who must influence the other line managers in light of the data drawn from the management control system.
>
> Given the focus of management control and the variables in it, the data for management control:
>
> (1) tends to be in monetary terms,
>
> (2) tends to be internally oriented and historical,
>
> (3) results from clearly defined sets of problems, and
>
> (4) tends to be rhythmic in nature. (1982, pp. 6-8).

A large part of the organization-wide effort in controlling an organization..."depends on knowing how to manage human resources effectively - in selecting staff, in dealing with human error, in introducing organization changes, in motivating people to better efforts, and in training and guiding people" (Mockler, 1972, p.9). In order to manage those human resources effectively, the organizational structure and control system must fit the needs of its employees (Gibson, 1976). If the structure and control system are at odds with the needs of its employees, employees may behave in ways that look good in terms of the control system measures but that are dysfunctional as far as the generally agreed upon goals of the organization (Lawler and Rhode, 1976). Thus, when one looks at the different aspects of management control in organizations, human resources must be considered a vital element in the environment surrounding the control system.

This section of the thesis looks at four aspects of control in organizations:

(1) the design of control systems,

(2) goals and objectives,

(3) measurement devices, and

(4) performance monitoring.

2. Design of Control Systems

While the need for good management control systems is documented in much of the accounting and management literature (e.g., Anthony and Herzlinger, 1980; Lawler and Rhode, 1976) poor decision making and improper utilization of resources is widespread in both the private and public sectors (Staats, 1981). This is due, in large measure, not to the lack of control systems but rather to poorly designed or poorly implemented control systems. Messal writes,

> The means of control include, but are not limited to form of organization, policies, systems, procedures, instructions, standards, committees, charts of accounts, forecasts, budgets, schedules, reports, checklists, devices, and internal auditing. It becomes apparent then that the design and implementation of controls will have a profound effect on the performance of an organization (1981, p.28).

Because of its impact on organization performance, control system design must be a carefully planned and executed process. In the model developed in this thesis, the design of management control systems is accomplished in three phases:

(1) management must view the organization as a system,

(2) the control system must be designed with the characteristics of the organization and its environment in mind, and

(3) management must review the constraints placed on the desired control system.

a. The Organization as a System

In its simplest form, an organization can be viewed in what Ivancevich, Szilagyi, and Wallace term the socio-technical systems model. Shown in Figure 2-1, the model is an input-transformation-output system. The system involves a number of activities, namely receiving inputs, transforming inputs, controlling, coordinating, and maintaining the transformation activities, and generating

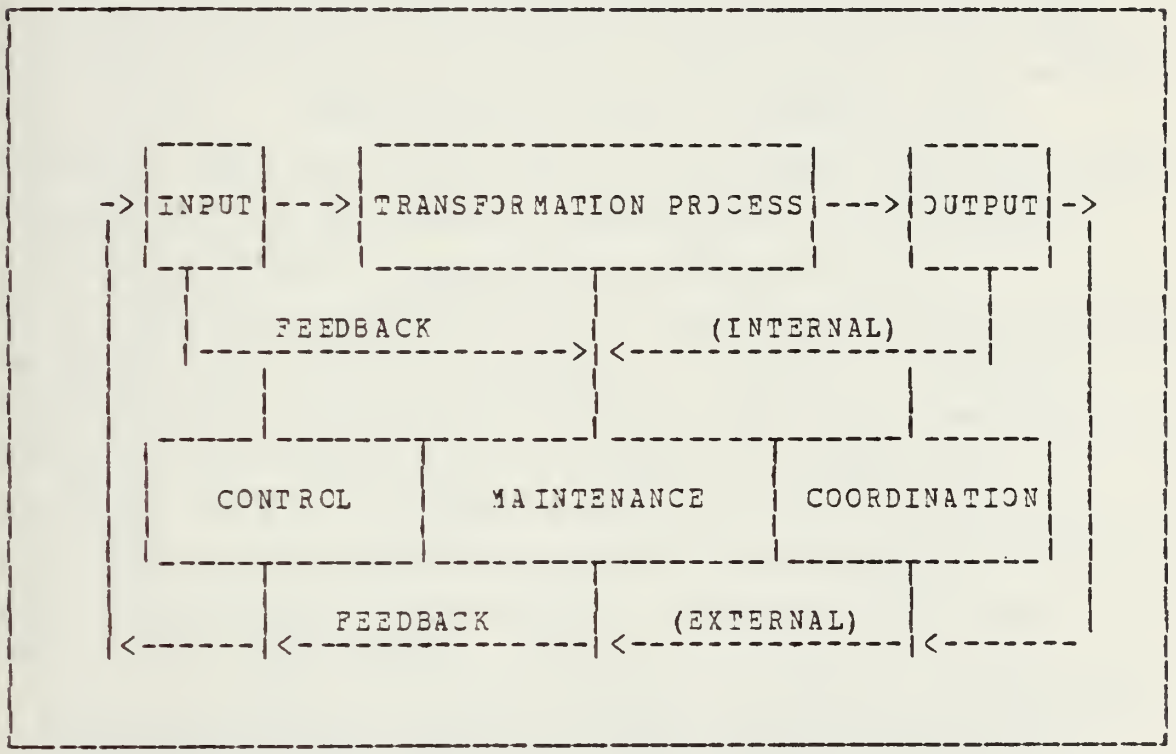


Figure 2.1 A SOCIO-TECHNICAL SYSTEMS MODEL.

outputs.

b. Characteristics of the Organization

Although numerous dimensions of organizations exist, the organizational characteristics to be discussed in the thesis model are: (1) the degree of decentralization,

(2) budgetary control, (3) span of control, (4) flow of spending authority, and (5) the internal review function. Each of the characteristics is integral to organizations and organizational structures and is supported in the accounting and managerial literature.

(1) Degree of Decentralization. The first major organizational characteristic to be discussed is the degree of decentralization within the organization. The tendency toward decentralized operations is..."one of the most striking characteristics of business operations and organizations during the past 15 years" (Moore and Jaedicke, 1972, p.542). Decentralization is a tendency which coincides with the rapid growth of business combinations and mergers and has two specific advantages. It provides a systematic means of delegating a portion of the decision-making responsibility to operating people below top management and motivates managers in charge of certain organization activities by bringing them more closely in touch with the organization's objectives (Moore and Jaedicke, 1972). By decentralization, top management in both the private and public sectors acknowledges its inability to handle the number of decisions which must be made in the organization. Copeland and Dascher write,

> Routine decisions in large organizations are too numerous for top management to administer. Both the managerial hierarchy and the number of resources that must be controlled mushroom in size. Top managers in centralized organizations lose the ability to respond quickly if they are innundated with problems requiring decisions. Decentralization alleviates this problem by forcing the information flow and data collection procedures to adjust to the needs of the new organizational structure (1974, p.408).

As the organization grows the management of the centralized organization quickly becomes "overloaded" with the decision making process. At the same time, the decision process in the decentralized operation is pushed further and further down the hierarchy.

The primary means of assuring top management control in the decentralized organization is through responsibility-center management (Copeland and Dascher, 1974). Responsibility-center management stresses accountability for managerial actions. According to Moore and Jaedicke, the management of each division has some authority for making decisions and thus becomes responsible for a segment of the organization's performance. They add that "even though the actual delegation of decisions may differ from organization to organization, the spirit of decentralization is to divide an organization into relatively self-contained divisions and allow these divisions to operate in an autonomous fashion" (1972). Ideally, division performance results are recorded and automatically traced to the individual at the lowest level of the organization who shoulders primary day-to-day responsibility for the action (Horngren, 1977). In the responsibility-center concept the manager is not subject to day-to-day monitoring of his decisions. However, "...he is accountable for the results through responsibility accounting - the mechanism that supplies the desired balance to the greater freedom of action that top management is given" (Horngren, 1977, p.157).

(2) Budgetary Control. While the degree of decentralization may differ from one organization to another, budgetary control is one of the principle steps in the management control process in all organizations (Anthony and Herzlinger, 1980). As reported in Livingstone, Lowe and Shaw state that:

> The annual budgeting procedure is probably the most important single decision and control routine of a firm from both the organizational and economic management viewpoints. From the organizational viewpoint the annual forecast of expected costs and revenues is a means through which management is able to agree on a planned allocation of resources.... From the economic viewpoint, the short-term budget is usually an important determinant of a number of economic decisions. The outcome measured...will normally present either the problems of an insufficiency or of an overabundance (1975, p.2).

The emphasis on the budgeting process and budgeting control in controlling an organization is further supported by Mathur (1979) and Moore and Jaedicke (1972). Moore and Jaedicke offer the following description:

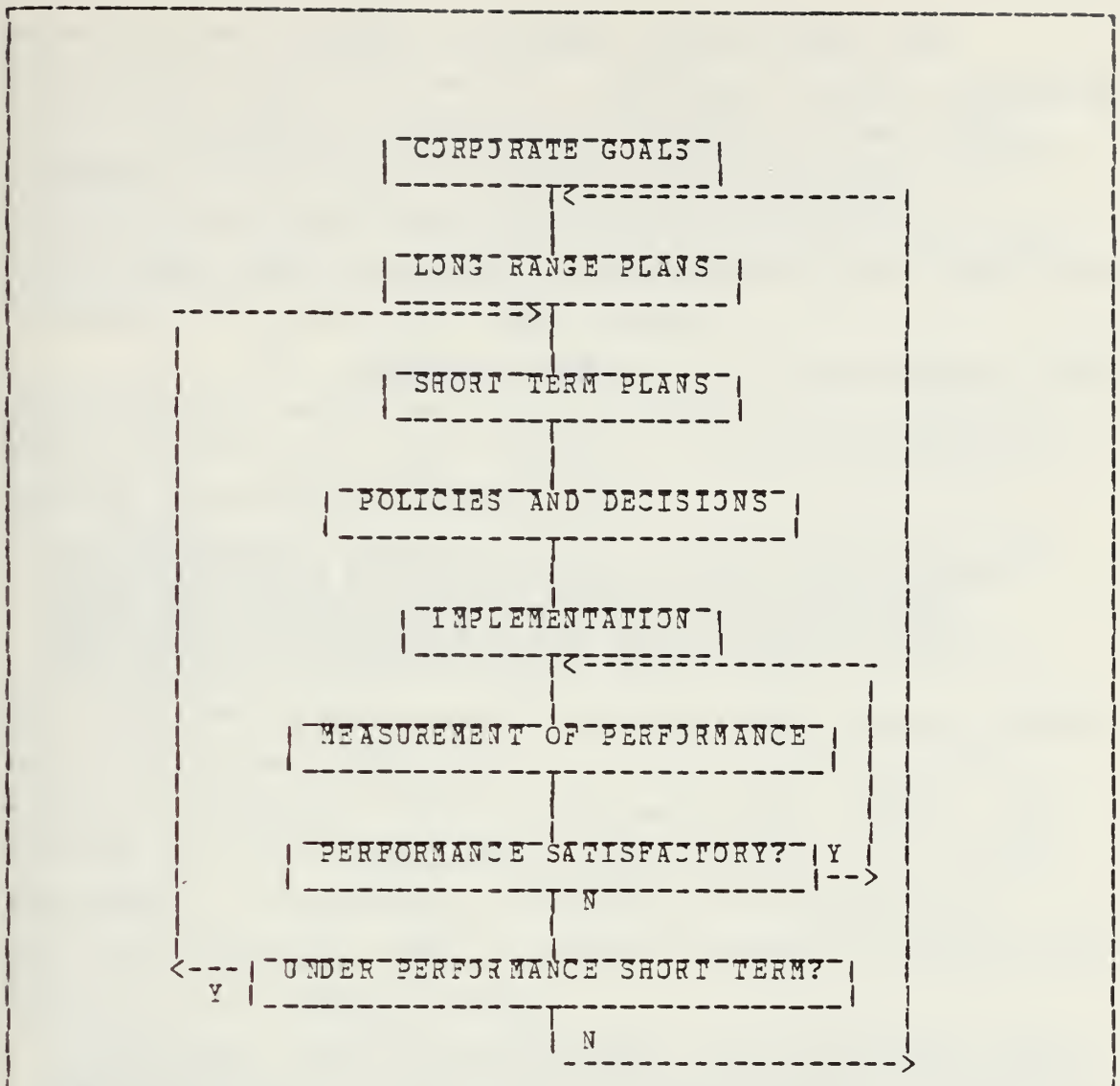
> The plans of management are incorporated into a budget for the company, and the actual results of operation are measured and compared with the budget. Significant variations are reviewed and an investigation is made to determine the causes for variation. Corrective steps are taken. Perhaps tighter control may be exercised over operations, or if conditions have changed, this should be recognized in a revision of the original plan (1972, p.578).

Mathur's representation of this model is shown in Figure 2-2.

As a major feature of the management control process, budgetary control helps assure management that the organization is operating the way they want and that resources are being managed effectively. Additionally, it enhances management control by providing a means of coordinating activities, by giving management a means for self evaluation, and by making it possible to measure progress (Moore and Jaedicke, 1972).

(3) Span of Control. Span of control refers to the number of subordinates or activities which a manager or supervisor can effectively manage. In the highly centralized organization, management may directly control from as few as three or four employees to as many as a hundred. In the decentralized organization, responsibility-center management breaks an organization into many working units - each designed with its own appropriate span of control. What constitutes an appropriate span of control is dependent on several factors. Included among them are:

> "how much professional work or administrative work the manager must personally perform; the degree to which the supervisor must get involved in work in order to manage effectively; the diversity of positions that are supervised; the number of relationships, other than supervisor-subordinate relationships which the supervisor must maintain on a regular and continuing basis" (Sibson, 1976, p.126).



(Mathur, 1979, p.71)

Figure 2.2 BUDGETING CONTROL FEEDBACK MODEL.

(4) Flow of Spending Authority.- The flow of spending authority should give the immediate superior organization the 'power of the purse' over its subordinate organizations. If the immediate superior organization or command is to maintain effective control over its

subordinates, spending authority should follow the operational chain of command. As Anthony writes, "spending should be authorized from higher levels to lower levels according to the formal organizational hierarchy. Difficulties arise when funds are received from sources other than higher authority in the organizational hierarchy" (Anthony and Herzlinger, 1980, p.438).

(5) Internal Review. The final organizational characteristic which must be considered is the internal review or internal audit function. Internal auditing or review, as defined by Sawyer is:

> an independent appraisal of the diverse operations and controls within an organization to determine whether acceptable policies and procedures are followed, established standards are met, resources are used efficiently and economically, and the organization's objectives are being achieved (1981, p.6).

The management control system in large organizations should have an internal audit staff to ensure that the control system is effective (Anthony and Herzlinger, 1980). The primary purpose of the internal audit staff is to assist management in evaluating the function of systems and controls (Pomeranz, 1976). Pomeranz quotes the Comptroller General of the United States:

> An important source of information is the internal audit organization which conducts independent examination and makes reports on its findings and appraisals of operations and performance. The internal audit function uniquely supplements routine management checks through its independent approach and methods of review. This function is one of the essential tools of management, complementing all other elements of management control (1976, p.88).

c. Constraints on the Control System

The third and final phase in designing a management control system is to review the constraints on the desired control system. Two of the major constraints on any control system are: (1) its ability to collect valid data and (2) the degree of control in the system (Lawler and Rhode, 1976).

(1) Data Validity. Collecting valid data is a major problem in control systems. Lawler and Rhode write:

> There are data that suggests employees will consciously feed invalid data into management information systems (e.g., Argyris, 1971; Munford and Banks, 1967; Pettigrew, 1970, 1972, 1973). One reason for such falsification seems to be to cover up errors or poor performance. Another reason is because control systems sometimes demand data that simply are not and cannot be collected. Faced with this situation an employee may choose to estimate the data rather than admit that it does not exist (1976, p.91).

Whether or not lower level managers submit valid control reports depends on top management emphasis on those reports. Lack of attention to reported information by top management will result in hastily accumulated and unvalidated information from subordinate managers. This invalid data does little to support effective decision making. The information and control system must provide valid data about what has been done and what can be done. The only way to provide that data is to design the system with the characteristics of the organization and its environment in mind (Lawler and Rhode, 1976).

(2) Degree of Control. While organizations with either too few controls or with too many controls make poor decisions and inefficient and ineffective use of resources, the methods of operating for the two types of organizations are entirely different. The organization with too few controls provides little guidance to its employees, recieves little information upon which to base decisions, and is not kept aware of what is going on in the organization. Sawyer states:

> Inadequate controls present hazards. People do things wrong - either carelessly or intentionally - if their work is not monitored or if systems are ineptly designed. Everybody needs a reviewer - either a human reviewer or a system which shouts "TILT" when something is done improperly (1981, p.91).

On the other hand, top management in an organization may have total, absolute control. This absolute control is very restrictive of subordinate authority, generates many, often times duplicative, control reports, and generates a feeling that the main purpose of management is to control rather than attain the objectives of the organization (Thorn, 1980).

Management must decide which controls are vital to the decision making process. The system should be designed around controls that ensure the accumulation and use of the needed information but should avoid a control system which "controls for the sake of control" (Sawyer, 1981).

3. Goals and Objectives

a. General

Goals and objectives indicate what management intends for the organization to accomplish (Drucker, 1968). Goals and objectives serve as the basis for decision making in the planning, execution, and control stages of the organization's operations (Anthony and Herzlinger, 1980). A statement of goals and objectives has two purposes.

> First, a statement of goals communicates top management's decisions about the aims and relative priorities of the organization and provides general guidance as to the strategy that the organization is expected to follow. Second, a statement of objectives provides specific performance measures by which outputs can be related to objectives (Anthony and Herzlinger, 1980, p.230).

b. Goals

Goals are statements of planned or desired results. Normally very broad based and not easily quantifiable, they cannot be used directly as a basis for a measurement system (Anthony and Herzlinger, 1980). However, a management control system should be designed with clear,

well defined goals. Well defined goals direct performance, reduce uncertainty, and serve as an instrument of communications "...and they do so whether goals are introduced directly or participatively" (Strauss and Sayles, 1980). At the same time, the control system should encourage what the accounting and related literature call goal congruence. "That is, does the system provide a global emphasis so that all major goals and their interrelationships are considered as carefully as possible when management acts?" (Horngren, 1977, p.151). Expressed another way, the system should be structured so that the personal goals of people in the organization are, so far as feasible, consistent with the goals of the organization as a whole (Anthony and Herzlinger, 1980).

Goals may also be expressed as constraints. Anthony and Herzlinger write:

> The operational goals of an organization are seldom revealed by formal mandate. Rather, each organization's operational goals emerge as a set of constraints defining acceptable performance....Typically, the constraints are formulated as imperatives to avoid roughly specified discomforts and disasters.
>
> For example, the behavior of each of the Military services seems to be characterized by effective imperatives to avoid: (1) a decrease in dollars budgeted, (2) a decrease in personnel, (3) a decrease in the number of key specialists, (4) reduction in the percentage of the military budget allocated to that service, (5) encroachment of other services on that services' roles and missions, and (6) inferiority to an enemy weapon of any class (Anthony and Herzlinger, 1980, p.228).

From a behavioral point of view, the manager whose performance is being measured should be involved in setting goals. This not only promotes goal congruence but also reduces dysfunctional behavior because it reduces the chance that too difficult, poorly understood standards will be set (Lawler and Rhode, 1976).

c. Objectives

Whatever the goals of the organization, the organizational objectives must be consistent with them. Objectives are specific results stated in measurable terms. Anthony and Herzlinger write, "Since measurement is always quantitative, if an objective is not stated in quantitative terms, performance toward achieving the objective cannot be measured, although it can be judged, evaluated, appraised, or weighed" (1980, p.230). It is this measurable nature of objectives that makes the accounting system the dominant means for setting goals and influencing management behavior in most organizations (Horngren, 1977). This is particulary true in the responsibility-center management concept. For example,

> In responsibility accounting the manager budgets the costs that he controls and thus has a valuable tool for evaluating his own performance. Top management is becoming aware of the importance of human behavior in an organization and budget policy is being formulated so that individuals will be motivated to cooperate in achieving organization objectives (Moore and Jaedicke, 1972, p.581).

4. Measurement Devices

a. A Critical Link

Measurement devices, the third aspect of control in organizations, is included in the model because a critical link in any control system is how inclusively it measures the behaviors that are performed by a job holder (Lawler and Rhode, 1976). Without complete, inclusive control measures, decision quality and data utilization may not be acceptable.

Two measurement devices commonly identified with control systems are accounting systems and budgetary systems (Horngren, 1977; Mathur, 1979).

They provide information that is used for three purposes:

(1) as a basis for coordinating and controlling the current activities of the organization,

(2) as a basis of evaluating operating performance, and

(3) as a basis for program evaluation

(Anthony and Herzlinger, 1980, p.17).

b. Characteristics of Measurement Devices

In selecting measuring devices, including accounting and budgetary systems, several characteristics of measuring devices should be considered.

First, they should be applied to some stated standards of performance.

Second, because the quantity dimension of output is usually much easier to measure than the quality dimension, care must be taken to prevent a detrimental emphasis on quantity (Anthony and Herzlinger, 1980).

Third, Anthony and Herzlinger list eight criterion for all measuring devices. They are:

(1) Some measure of outputs is usually better than none.

(2) If feasible, relate output measures to measures available from outside sources.

(3) Use measures that can be reported in a timely manner.

(4) Develop different measures for different purposes.

(5) Focus on important measures.

(6) Don't report more information than is likely to be used.

(7) If feasible, tie output measures to expense measures.

(8) Don't give more credence to surrogates than is warranted (1980, p.242).

Finally, measures tend to become an end in themselves. When measures become the end product they result in rigid bureaucratic behavior, and eliminate the distinction between measures and standards (Thorn, 1980).

5. Performance Monitoring and Appraisal

a. General

The final aspect of control in organizations to be discussed is performance monitoring and appraisal. Monitoring performance provides information on the status of organizational activities. Performance appraisal is managements way to:

(1) provide feedback to each manager on his or her performance,

(2) serve as a basis for modifying or changing behavior to meet organizational goals, and

(3) provide a basis which top management may use to assign incentives or rewards (Ivancevich, 1977, p.293).

Performance monitoring and appraisal should motivate subordinates to work for orgnizational goals and objectives. To achieve the desired motivation, performance appraisals must point out to subordinates how near or how far away from established standards they are, and provide information necessary for any corrective action.

Successful performance monitoring requires an effective information system, the selection of an appropriate evaluation index, and the establishment of a standard against which to measure the actual performance (Anthony and Herzlinger, 1980; Mockler, 1972).

b. Information Systems

A key element in monitoring performance is an information system that:

(1) provides information to the decision maker,

(2) provides data rapidly and at an appropriate time interval,

(3) avoids information overload, and

(4) presents data in an understandable form and language. (Gibson, 1976, p.190).

Such a system should be comprised of three main types of information - financial, routine, and a variety of non-routine, unsystematic information (Anthony and Herzlinger, 1980). First, financial information should be identified with responsibility centers and should differentiate among information on what has happened (historical), what will happen in the future (forecasts) and estimates of what should happen (budgets) (Anthony and Herzlinger, 1980, p.10).

Second, routine management control reports are usually submitted monthly (Anthony and Herzlinger, 1980). Routine, recurring control reports should be submitted as soon after the end of the reporting period as possible, i.e., within two working days, and in the prescribed format. If the data is not available for complete reports, then abbreviated or estimated data reports should be submitted. "The recurring reports should be carefully designed so that they show all the information that is needed, but no more, and the report format should be easily understood and not formidable" (Anthony and Herzlinger, 1980, p.476).

Third, non-routine, unsystematic information comes from such sources as trade publications, newspapers, conversations within the organization, message traffic, notes and notices, and personal observations and "is essential to an understanding of what has happened and often more important than that contained in routine reports" (Anthony and Herzlinger, 1980, p.475).

c. Evaluation Index

The selection of an evaluation index is difficult because an index may be used as an aid in decision making as well as in evaluating performance (e.g., number of hours flown, obligation rates, reenlistment rates) and an index that is satisfactory for one may not be suited for the

other (Moore and Jaedicke, 1972). Index selection is also difficult because it is sometimes hard to measure effectiveness in monetary terms. For example, it is difficult to equate maximum aircraft and pilot effectiveness with cost per flying hour. Aircraft and pilot effectiveness are more a function of the type of missions flown and the number of of hours flown than they are the cost per flying hour. Efficiency, on the other hand, can be directly related to costs. As the ratio of outputs to inputs, it is relatively simple to compute the cost per flying hour for a given squadron. But cost as an index has its limitations. Anthony and Herzlinger point out that:

> Cost...is never a perfect measure for at least two reasons:
> (1) recorded costs are not a precisely accurate measure of resources consumed; and
>
> (2) the standards being measured against are, at best, only approximate measures of what resource consumption ideally should have been in the circumstances prevailing (1980, p.5).

d. Standard of Performance

Once the type of index has been selected, a standard of performance against which to measure actual performance must be chosen. It is often a budgeted cost, budgeted profit, or rate of return and is based upon organizational objectives and budgets or upon past performance (Moore and Jaedicke, 1972). For example, in monitoring the performance of the Navy Flying Hour Program, the evaluation index is cost per flying hour. A cost per flying hour for each type/model/series (TMS) aircraft in the Navy inventory is established by the Chief of Naval Operations (CNO) and is disseminated to Naval aviation operating units as a budgeted cost per hour for each TMS aircraft. Actual cost per hour is then compared against the budgeted cost per hour. By using such established standards (e.g., cost per hour), it becomes possible to monitor and appraise the performance of subordinate managers.

e. Incentives and Rewards

Performance monitoring and its subsequent appraisal are used by top management for assigning incentives and rewards. The results of experimentation indicate that when rewards were granted on the basis of performance, the subjects' performance and satisfaction was significantly higher than that of unrewarded subjects (Ivancevich, 1977). Sibson points out:

> Studies of incentive (reward) plans covering top management and professional employees show changes in behavior and increases in effectiveness on the order of 10 percent....But perhaps the most persuasive evidence of the usefulness of incentive plans in increasing productivity are the views of management people in companies that have such plans. Practically all believe that incentives make a positive contribution toward more effective work (1976, p.185).

Thus, performance monitoring and appraisal tie together employee performance, employee satisfaction, and organizational goals.

D. SUMMARY

The chapter defined and discussed management control, reviewed the concepts of control, identified various characteristics of management control systems, and concluded with a detailed description of management control in organizations. Specific points made in the model included:

(1) defining control

(2) identifying four characteristics of management control systems,

(3) discussing four aspects of control in organizations,

(4) emphasizing the importance of a statement of goals and objectives, clear, well defined goals, and goal congruence,

(5) identifying accounting systems and budgetary systems as two commonly used measurement devices and outlining

five characteristics of measuring devices,

(6) describing three main types of information which should be included in information systems,

(7) explaining the need for a suitable evaluation index and performance standard, and

(8) discussing the relationship between performance monitoring and appraisal and incentives and rewards.

The next chapter describes the management control of Flight Operations funds at the Headquarters, Commander, Naval Air Forces, Pacific Fleet. The chapter explains the Type Commander's management concepts, the flow of Flight Operations funds and the specific management tools used in controlling Flight Operations funds.

III. MANAGEMENT CONTROL OF FLIGHT OPERATIONS (OFC-01) FUNDS

A. INTRODUCTION

Chapter Three describes the control of Flight Operations (OFC-01) funds by the Staff, Commander, Naval Air Forces, U.S. Pacific Fleet (CNAP). The chapter defines Flight Operations (OFC-01) funds, describes the financial responsibility of CNAP, and presents the flow of funds from CNAP to its operating squadrons. Operating Targets (OPTARs), the Budget OPTAR Report (BOR), Flying Hour Program (FHP), and the Flying Hour Cost Report (FHCR) are all discussed. Finally, the chapter reviews CNAP Staff management.

B. FINANCIAL RESPONSIBILITY

Commander, Naval Air Forces, Pacific (CNAP) receives fund limitations under the appropriation, Operation and Maintenance, Navy from Commander- in-Chief, U.S. Pacific Fleet (CINCPACFLT). Along with the fund limitations, CINCPACFLT provides guidelines regarding the responsibility of the Type Commander in the management of his funds. As a Type Commander, CNAP must insure that:

(1) financial transactions are not incurred in excess of fund availability,

(2) funds be used only for the purpose for which they are appropriated,

(3) unliquidated obligations be periodically reviewed to ensure that only valid transactions remain on financial records and reports,

(4) a command line of communication is maintained relative to financial requirements, so that shortfalls and excesses are properly addressed to permit maximum effective and efficient use of available funds, and

(5) an effective internal review program be implemented to aid the fund administrators in assessing the fidelity with which prescribed procedures are being followed for the

accounting and expenditures of appropriated funds. (CINCPACFLT INSTRUCTION 7042.4E, 19 APRIL 1979, p.2)

The financial responsibility of the Type Commander is expanded by NAVSO P-3013-2 to include the financial management of all ships, squadrons, and other units under his command (1974, p.4-9). Explaining how CNAP carries out these financial management responsibilities in managing that portion of the Operations and Maintenance, Navy (O&M,N) appropriation allocated for Flight Operations (OFC-01) funds is the purpose of this chapter.

C. DEFINITION

Flight Operations (OFC-01) funds are those funds, and costs, associated with the operation of aircraft. OFC-01 funds are provided to support petroleum, oil and lubricants (POL) and other flight operations requirements. OPNAVINST 7310.1D specifically defines fuel costs, oil and lubricants costs, and other flight operations costs.

> "Fuel Costs" is the cost of fuel (gross adjusted obligations) used by the Type/Model/Series (TMS) aircraft reported during the report month, as contained in the official accounting records.
>
> "Oil and Lubricants Costs" is the cost of the oil and lubricants (gross adjusted obligations) used by the TMS aircraft reported during the report month, as contained in the official accounting records.
>
> "Other Flight Operations Costs" is the cost of personal flight support items (see Appendix B) used by the TMS aircraft being reported during the report month, as contained in the official accounting records. (1980, p.4)

D. ADMINISTRATION OF OFC-01 FUNDS

The Staff position with primary responsibility for managing OFC-01 funds is tasked to "monitor flight operations" and "closely administer funds in support of the Flying Hour Program (FHP) insuring distribution of funds for a balanced program" (COMNAVAIRPACSTAFFINST 5440.2E, 1982,

p.2-3-15). The monitoring aspect of OFC-01 funds administration is supported by top level Navy management. Chief of Naval Operations (CNO) guidance relating to flight hour costs calls for the "reporting of flight hour costs and related flying hours to permit monitoring of funds related to the Flying Hour Program, to allow for the development of flying hour cost factors, to insure uniformity of data reported and to insure conformance to Comptroller of the Navy financial reporting requirements" (OPNAVINST, 7310.1D, 1980, p.1).

E. FLOW OF OFC-01 FUNDS

The budgetary process of the U.S. Government supports decision making and provides for effective financial control, and accountability for the use of Federal resources (PPC Text, 1981). The process consists of a cycle of four overlapping phases: formulation, congressional action, execution and review. An overview of this entire cycle is provided in Appendix A. The present discussion is limited to that part of the execution phase of the budget process encompassing the flow of funds from CNAP to its operating forces.

The Comptroller of the Navy (NAVCOMPT) is the Responsible Office for both SECNAV and CNO for O&M,N funds appropriated to the Navy. All Navy funds, except Research, Development, Test and Evaluation (RDT&E) and Marine Corps funds, flow through the office of the CNO. NAVCOMPT (OP 92) allocates O&M,N funds to major claimants, i.e., CINCPACFLT. CINCPACFLT reallocates O&M,N funds to the sub-claimant level, i.e., CNAP. CNAP issues Operating Budgets (OB's) to certain field activities, and to themselves. From the OB issued for their own use, CNAP issues Operating Targets (OPTARS) to operating forces under its command (COMNAVAIRPACINST 7303.11E, 1976).

F. THE MEASURING DEVICE

1. General

As stated in Chapter I, CNAP's FY 82 budget calls for the expenditure of $522 million in OFC-01 funds. Adequate control of these funds is crucial if CNAP is to accomplish its stated mission. The control device used by CNAP is a budget comprised of two separate, but very related, parts - dollars and flying hours. Inputs for the budget do not originate at the squadron level. Several commands above the squadron level are involved in budget submissions and in determining annual planning figures (APFs). However, squadrons are not normally required to submit inputs for CNAP budget submissions and are not assigned APFs. Flying hour determinations do not take place below CNAP. CNAP makes a flight hour budget submission to CINCPACFLT which validates the flight hours and costs per hour allocated on the CNO OP-20 (COMNAVAIRPACINST 7303.11E, 1976). Utilization of both dollars and flying hours is measured through the management of OPTARs.

2. Operating Target (OPTAR)

NAVSO P-3013-2 defines OPTAR as "an estimate of the amount of money which will be required by an operating ship, staff, squadron, or other unit to perform the tasks and functions assigned" (1974, p.4-9). The emphasis on the estimate aspect of the OPTAR is important. OPTARs are not subject to the provisions of Section 3679, R.S., and the establishment of an OPTAR must be done in a manner that precludes the creation of, and the assignment of an OB. However, NAVSO P-3013-2 does assign specific responsibility in the management of OPTARs.

> Each aviation squadron, or command issued an OPTAR is responsible for the efficient and effective use thereof, including accurate and timely accounting and reporting (1974, p.4-13).

Each aviation squadron will establish a Requisition/OPTAR Log (NAVCOMPT 2155) to record OPTAR grants and the value of transactions authorized to be incurred as chargeable to the Type Commanders' OB (1974, p.4-23).

CNAP provides detailed guidance for the management of OPTARs in COMNAVAIRPAC INSTRUCTION 7303.11E:

> At the beginning of each fiscal year, a first quarter OPTAR will be established for each of the operating units under the administrative command of CNAP. Receipt of an OPTAR is considered authorization to place obligations against CNAP funds up to the amount of the OPTAR grant.
>
> Following the initial OPTAR grant in the first quarter of the fiscal year, the Optar will be increased by quarterly grants at the beginning of the second, third, and fourth quarters. Any OPTAR balance remaining at the end of the first, second, and third quarters will be automatically carried forward to the following quarter. Any OPTAR balance remaining at the end of the fourth quarter will automatically revert to CNAP. (1976, p.II-1)

3. Obligations

OFC-01 OPTARs are reduced by placing unfilled orders for desired material. The nature of the charge is identified by the Fund Code (7B, 7F, 9J) cited on the requisition document. In order to distribute charges among various aircraft Type/Model/Series (TMS), the Type Equipment Code (TEC) for the applicable aircraft TMS is cited on all OFC-01 requisitions. Three times per month, on the 10th, 20th, and last day of the month, the obligations recorded in the Requisition/OPTAR Log are totalled and verified and copies of each unfilled order are forwared to the Fleet Accounting and Disbursing Center, Pacific (FAADCPAC) (COMNAVAIRPACINST 7303.11E, 1976).

Obligations and obligation rates are monitored both by CNAP and the Functional Wing Commanders. The Functional Wing Commander visits all non-deployed units at least semi-annually in order to review all obligations for propriety and verify the need for outstanding unfilled orders.

4. Budget OPTAR Report (BOR)

On a monthly basis, the Budget Optar Report (BOR) is transmitted to FAADCPAC, with CNAP and the appropriate Functional Wing Commander as information addressees. The report, Figure 3-1, is due on or before 2400 on the second calendar day of the month. It is the BOR that is the primary financial management device used at CNAP (Reily, 1982). Each OPTAR Functional Category (e.g., OFC-01, OFC-50) is reported on a seperate BOR. Each BOR reports:

(1) obligations by fund code,

(2) the value of each ten day transmittal,

(3) the total OPTAR granted for the year, and

(4) any additional information required by the Type Commander (e.g., Flight Operations and Aviation Fleet Maintenance information).

CNAP Staff personnel (Code 019111.3) review each of the 144 BORs received by CNAP for accuracy. Discrepancies are reconciled with the reporting squadron and corrected figures are entered in memorandum accounting records. CNAP uses the reported figures to:

(1) evaluate its financial situation,

(2) to support subsequent fiscal year budget submissions,

(3) to measure squadron budget performance, and

(4) to prepare several management control reports, including the Flying Hour Cost Report and other reports in support of the Flying Hour Program (FHP).

FROM:
TO:
INFO:

UNCLAS //N07330//
CNAP PASS TO 019

FLT OPS BUDGET OPTAR REPORT

1.
2. BLOCKS

21	22	23	24	25	26	27	28
7B	604861.50	.00	604361.50	AAFF	32	1099	2807
7B	8242.75	.00	3242.75	ATCD	4	195	393
7F	13058.99	667.74	13736.73	AAFF	19981	474203	0
7F	208.99	5.26	203.73	ATCD	9945	0	0
9J	1108.76	26.91	1135.67	AAFF	0	0	0
9J	80.27	3.68	83.95	ATCD	0	0	0
TL	627591.26	693.07	628284.33		36	1294	3200

29	007/2	008/2	009/2	
30	27024.30	97524.90	77452.90	202002.10

31 700000.00
32 09-09-82
33 09-09-82
34 RECAP OF MONTHLY FUEL CONSUMPTION

	A.	B.	C.	D.
	JP4	1099	0	19981
	JP5	25585	2091	474203
	AVGAS	0	105	9945
	TOTAL	26684	2196	504129

35 NA
36 LCDR R.N. BURTON 873-3256

Figure 3.1 BUDGET OPTAR REPORT.

G. MEASURING PERFORMANCE

1. The Navy Flying Hour Program

The Navy Flying Hour Program (FHP) is the program utilized by the Navy to plan, program, and budget its aviation forces. Discussed in detail in Appendix C, it includes all requirements, budgeted hours, associated costs, fuel usage and readiness milestones for Naval Aviation forces. The FHP consists of two main parts - flying hours and cost per flying hour.

2. Flying Hours

Flying hours are allocated by CNO (OP 51C) for each Type/Model/Series (TMS) aircraft. The number of hours is based on force projections for the coming fiscal year, on a review of the number of hours flown during the past three fiscal years, and on predicted requirements for the upcoming year (Kiley, 1982).

Flight hours are allocated to squadrons, carriers, and naval air stations as quarterly planning figures which may be exceeded if OPTAR funds are sufficient to support additional hours. The hours are allocated for a specific quarter and may not be carried forward to the next quarter (COMNAVAIRPACINST 7303.11E, 1976).

The flight hours allocated are based on the hour milestones for each type of aircraft as determined by the Fleet Commander to be necessary to maintain stated readiness objectives. To provide guidelines for the squadron commander for the execution of his training program, each Fleet Commander publishes a CNO approved training and readiness manual. The manual identifies those evolutions deemed essential to attain and maintain the desired

readiness level. These milestones are equated to a number of flying hours required for their completion.

The flying hours that CNAP must monitor are divided into three categories:

a. TACTICAL AIR/ANTI-SUBMARINE WARFARE, operational combat units;

b. FLEET READINESS SQUADRONS, units which provide transition and refresher training;and

c. FLEET TACTICAL SUPPORT, units which support fleet air, sea and shore based missions.

a. Tactical Air and Anti-Submarine Warfare (TACAIR/ASW)

TACAIR/ASW flying hour requirements are based on three factors:

(1) force levels (UE)

(2) the flight crew manning factor required to carry out assigned missions (Crew Seat Ratio - CSR), and

(3) the hours required to maintain the average flight crew qualified and current to perform its assigned mission (Primary Mission Readiness - PMR).

A combination of these factors provides the annual Flight Hour requirement for each TACAIR/ASW squadron. The general equation is:

UE X CSR = NUMBER OF CREWS

NUMBER OF CREWS X PMR X 12 = ANNUAL FLIGHT HOUR REQUIREMENT.

b. Fleet Readiness Squadrons (FRS)

Fleet Readiness Squadron (FRS) requirements are determined by the number of students to be trained. Students are programmed in one of five different categories, each of which requires a prescribed number of training hours.

c. Fleet Tactical Support (FTS)

Fleet Tactical Support (FTS) hours are a function of the number of forces assigned to FTS by CNO and a prescribed utilization rate for each aircraft.

3. Cost Per Flying Hour

The second part of the FHP monitored by CNAP is cost per flying hour. For Flight Operations, the cost per hour is the result of the division of two totals - OFC-01 costs and the hours flown for each type of aircraft in the fleet (Bozin, 1981). OFC-01 obligations and hours flown are reported monthly to CNAP by all squadrons under his administrative command. Operating forces provide flight operations information on their monthly BOR. Shore activities which charge their flight operations costs to their own OB provide their monthly information on a monthly Flying Hours Cost Report. Although different in format, both the BOR and the activity Flying Hour Costs Report provide the following information:

(1) Obligations for POL and other Flight Operations;

(2) Applicable aircraft type equipment code (TEC);

(3) Number of operating aircraft;

(4) Total gallons of AVGAS/JP-4 consumed during the report month;

(5) Flight hours flown during the month;

(6) Total gallons of JP-5 consumed during the report month.

The information is consolidated and verified by the Staff, CNAP who then provides three related outputs:

(1) The Flight Hour Costs Autodin Report (OPNAV 7310-3A),

(2) A computed cost per hour for each TMS, and

(3) A series of staff management reports.

a. Flying Hour Cost Report (FHCR)

The Flight Hour Costs Autodin Report is submitted by CNAP to CNO (OP 51C). OPNAVINST 7310.1D provides the following specific instructions in the report submission:

> the report will provide CNO with only those gross adjusted obligations which are directly associated with the operation and maintenance of aircraft; e.g., aircraft POL and consumable material and supplies. Further, it is emphasized that military labor, civilian labor, administrative overhead, commercial washing of aircraft, labor saving devices, initial IMRL, travel costs and non-man carrying target drone costs are not to be included in reporting costs (1980, p.2).

The report provides CNO with the same OFC-01 information that is provided to CNAP (e.g., number of aircraft, flying hours, fuel costs). In addition to Flight Operations costs, the report also provides organizational and intermediate maintenance (AFM) costs. This information is collected by CNO and used to produce the yearly budget for dollars, hours, and costs per hour - the CNO OP-20 REPORT.

b. Computed Cost Per Hour

CNAP's computed cost per hour is used to measure the performance of reporting squadrons in meeting the budgeted cost per hour objectives established in the OP-20. Significant variances from the prescribed figures must be justified by the reporting squadron. Additionally, since the number of hours that can be flown by a squadron is

directly related to a specific dollar OPTAR grant, increased costs per hour reduce the number of hours that may be flown (Reily, 1982).

H. STAFF MANAGEMENT

1. Fleet Accounting and Budget Officer

The CNAP Staff position with primary responsibility for managing OFC-01 funds is the Fleet Accounting and Budget Officer (Code 01911). The position is tasked to..."monitor flight operations and closely administer funds in support of the flying hour program (FHP); insuring distribution of funds for a balanced program" (COMNAVAIRPACSTAFFINST 5440.2E, 1982, p.2-3-15).

2. OFC-01 OPTAR Records Keeper

The Staff position with the responsibility for the majority of the administrative effort in monitoring OFC-01 funds (Code 019111.3) has the following duties:

(1) receive, record, validate and control the Flight Operation Budget OPTAR Reports,

(2) initiate corrective action on reports that are incorrect,

(3) assist in maintaining the Flying Hour Cost Report system,

(4) prepare input data for the consolidated Flying Hour Program cost submission to CNO,

(5) validate the Flying Hour Cost Report output data,

(6) perform minor analysis on the Flying Hour Program data,

(7) initiate follow-up action on missing 3ORs,

(8) prepare several Staff OFC-01 management reports, and

(9) maintain various other financial control records.

The monthly OFC-01 funds information inflow to this Staff position consist of 144 Budget OPTAR Reports and numerous station Flying Hour Cost Reports. Records indicate that approximately twenty percent of the BORs received either have invalid data or are not received in the prescribed time period. Corrections to erroneous inputs and expediting late reports is normally accomplished via telephone. There is presently no written Staff feedback to the reporting squadrons regarding the quality of the data they have provided.

3. Internal Review

Staff review of internal controls and financial practices is accomplished by the Staff position Code 019A. That position is also assigned auditing and Foreign Military Sales duties. The position is assigned the following duties, responsibilities, and authority:

(1) appraise the adequacy of internal controls and the quality of procedures for necessity, economy, and conformity with policies and principles established by higher authority.

(2) Recommend improvements to correct deficiencies noted in financial practices within the Resource Management office and other Staff departments.

(3) Serve as principal liaison with the Naval Audit Service and its representative for all audits conducted within the Command or its field activities.

(4) Serve as contact point and liaison with the General Accounting Office and its representatives for GAO visits and reports concerning NAVAIRPAC.

(5) Perform annual review of timekeeping functions for COMNAVAIRPAC Staff civilian personnel.

(6) Perform financial reviews of appropriated funds held by the Resource Management Officer and other Staff departments.

(7) Serves as contact point for financial aspects of FMS, computes and submits for reimbursement, the various cost elements associated with FMS.

(COMNAVAIRPACSTAFFINST 5440.2E, 1982, p.2-3-11).

I. SUMMARY

This chapter has described the monitoring of OFC-01 funds and costs at CNAP. The primary control mechanism is the budgetary system which uses the Budget OPTAR Report as the measuring device. The BOR not only provides necessary financial information, but also the information needed to support the Navy Flying Hour Program (FHP).

The financial responsibility of the Type Commander in monitoring OFC-01 funds has been discussed. The flow of funds from CNAP to the operating unit and the operational chain of command from CNAP to commands under its administrative command has been presented.

The Operating Target (OPTAR), Budget OPTAR Report (BOR), Flying Hour Program (FHP), and Flying Hour Cost Report have been discussed. Significant points discussed include:

(1) the responsibility of the squadron for the efficient and effective use of OPTAR dollars without any means of measuring that effectiveness,

(2) the critical nature of information on the BOR in the effective management of OFC-01 funds,

(3) the importance of the FHP in planning, programming and budgeting for Naval aviation forces,

(4) the relationship between the BOR and Flying Hour Cost Report, and

(5) the use of the BOR in preparing the Flying Hour Costs Autodin Report and a computed cost per hour for each Type/Model/Series (TMS) aircraft.

Finally, the chapter described the Staff management of OFC-01 funds, including the responsibilities of the Fleet Accounting and Budget Officer (01911), Staff position 019111.3, and the internal review position (019A).

The next chapter compares the management control system of OFC-01 funds at CNAP with the model of management control systems developed in the thesis.

IV. COMPARISONS

A. GENERAL

The purpose of this chapter is to compare the management control system for Flight Operations (OFC-01) funds at the Headquarters, Commander Naval Air Forces, Pacific (CNAP) with the model of management control systems developed in the thesis. The chapter is divided into two parts. Part one compares the control system for OFC-01 funds to the characteristics of control systems identified in the model. The second part compares the CNAP control system for OFC-01 funds with four elements of organization control systems described in the model - (1) design of control systems, (2) goals and objectives, (3) measurement devices, and (4) performance monitoring and appraisal.

B. CHARACTERISTICS OF CONTROL SYSTEMS

1. Essential Elements

a. Information Systems

In the model, information systems record the progress of an activity. CNAP has a well developed information system for recording the progress of its activities. The primary elements of that information system are the BOR and the FHCR. In addition, there is frequent informal oral and telegraphic communications between the Staff and the operating squadrons, between the Functional/Air Wing Commanders and the operating squadrons, and between the Staff and the Functional/Air Wing Commanders.

b. Structural Organization

According to the model, the activity should be an element in a structural organization. The control system for OFC-01 funds is an element in the hierarchical financial structure which exists from the CNO level to the operating unit level. Information (e.g., obligations, hours flown, gallons of fuel consumed) is collected at the squadron level, recorded in standardized records, and transmitted to CNAP. CNAP, in turn, collects the information on BORs and FHCRs, records the information in memorandum records, and transmits flying hours and cost per hour to higher authority. The frequency and format for both the BOR and the FHCR are specified in CNAP and other Navy instructions.

c. Feedback to the Organizational Unit

The third essential element required of control system characteristics is a formal report document for generating "feedback" to the organizational unit. There is no formal "feedback" report for OFC-01 funds generated by CNAP. Squadrons are normally contacted by telephone or by message regarding errors in BOR/FHCR submissions.

d. Activity Measures

As stated in the model, a planned or predetermined activity measure against which actual achievement measures can be compared must be established. Three such measures exist at CNAP - budgeted dollars, budgeted flight hours, and cost per hour.

At the beginning of each fiscal year, a first quarter OFC-01 OPTAR is established for each aviation unit under the administrative command of CNAP. The OPTAR authorizes obligations against CNAP funds up to the amount of the OPTAR amount (COMNAVAIRPACINST 7303.11E, 1976). The

activity measure (funds authorized) is revised and restated at the beginning of each subsequent quarter when funds for that quarter are authorized. Obligations and obligation rates are measured by reviewing the monthly BOR submissions.

Flight hours are allocated to squadrons, carriers, and Naval Air Stations as quarterly planning figures which may be exceeded if OPTAR funds are sufficient to support additional hours. The hours are allocated for a specific quarter and may not be carried forward to the next quarter (COMNAVAIRPACINST 7303.11E, 1976).

CNAP's computed cost per hour (CPH) is used to measure the performance of reporting squadrons in meeting the budgeted cost per hour objectives established in the CNO OP-20. Variances from the prescribed figures must be justified by the reporting squadron.

e. Decision Making

Finally, the model requires a decision making capability within the organization unit to take action that will bring the achievement level in line with the planned level. The Squadron Commanding Officer, by the very nature of his position, generally has that decision making capability. He is responsible for the efficient and effective use of the resources made available to him. Disregarding superordinary requirements placed upon him by his superiors, the Squadron Commanding Officer is in a position to make decisions that will keep obligations, flight hours and cost per hour (CPH) in line with budgeted or planned levels.

2. The Organization as a Total System

In the model, a management control system is described as a total system in the sense that the system must behave as a whole; the changes in every element are

dependent on all the others. The control system for OFC-01 funds exists within a control framework established by CNO. By allocating flying hours and dollars and by setting cost per hour standards, CNO is embracing virtually all aspects of the aviation community. As a part of the FHP, obligations of OFC-01 funds impact on decision making concerning operational schedules, training exercises, the number of aircraft available for flying, the number of pilots available, actual versus projected cost per hour, and the amount of funds appropriated by Congress and allocated by CNO and CINCPACFLT.

3. Goal Congruence

A third characteristic of control systems is goal congruence. As described in the model, the use of technical tools (e.g., budgets, standards, formal measures of performance) provides information and feedback to help ensure goal congruence. Snap's control system for OFC-01 funds uses budgets, standards (CNO OP-20), and formal measures of performance (CPH) to generate and receive large amounts of information (e.g., BORs, FHCRs). However, there is no formal feedback to the squadron level. Thus, one of the two elements required to enhance goal congruence is missing from the control system for OFC-01 funds.

4. Financial Structure

Finally, as stated in the model, management control systems are built around a financial structure. The entire information and reporting structure of the OFC-01 control system is based on monitoring and reporting financial information: OPTARs and OBs are in terms of targeted dollar levels and the BOR and FHCR report obligations. Although hours flown are reported and budgeted within the OFC-01 funds control system, they are a direct function of cost per hour and funds authorized.

C. CONTROL IN ORGANIZATIONS

1. Design of Control Systems

a. The Organization as a System

Described in the model as an input-transformation-output system, an organization involves a number of activities, namely receiving inputs, transforming inputs, controlling, coordinating, and maintaining the transformation activities, and generating outputs. As a major staff command, CNAP fits this input-transformation-output model. The mission of the Staff, as stated in CNAPSTAFFINST 5440.2E, is to:

> (1) Gather and evaluate detailed and accurate information on all phases of the existing situation--strategic, tactical, and logistical.
>
> (2) Prepare plans, schedules, directives, and reports based upon such information, or in compliance with directives received from higher authority.
>
> (3) Translate the decision of the Commander into directives.
>
> (4) Disseminate information and directives to subordinate commanders and information and reports to higher authority rapidly, accurately, and completely.
>
> (5) Supervise and evaluate the execution of the Commander's directives by subordinate commands.
>
> (1982, p. 1-1-1).

Within the Staff, the Fleet Budget and Accounting Officer (Code 01911) has many duties which correspond to the characteristics of the input-transformation-output system. Some of those duties include:

> (1) formulate budget and apportionment calls,
>
> (2) receive budget and apportionment requests from subordinate commanders,
>
> (3) coordinate budget submissions to CINCPACFLT,
>
> (4) administer funds in support of the Flying Hour Program,
>
> (5) review financial performance, both by activity and funding category, and

(6) initiate recommendations for adjustments or reprogramming of resources.

(COMNAVAIRPACSTAFFINST 5440.2E, 1982, p.2-3-15).

A central part of CNAP's organizational system is the flow of OFC-01 funds. Funds flow directly from CNAP to the user squadrons and the subsequent financial reports go from the squadrons back to CNAP. The Commanders, Commanding Officers, and Officers in Charge of NAVAIRPAC operating forces are responsible to CNAP for:

(1) The effective and economical utilization of funds and material.

(2) The establishment and maintenance of records as required herein, and as required by directives from higher authority.

(3) That charges are not incurred in an amount in excess of funds granted except in emergencies as discussed in paragraph 200.2.

(4) The propriety of charges to COMNAVAIRPAC funds.

(5) The timely submission of all required reports.

(6) The prompt return to COMNAVAIRPAC of any funds which are in excess of the activity's needs. (COMNAVAIRPACINST 7303.11E, 1976, p. I-1)

b. Characteristics of the Organization

Five characteristics of the organization that are required to relate the total system to its environment are identified in the model Those characteristics are: (1) the degree of decentralization, (2) budgetary control, (3) span of control, (4) flow of spending authority, and (5) internal review. An analysis of the CNAP Staff control of OFC-01 funds indicates that the characteristics are present, to varying degrees, in the CNAP Staff organization.

(1) Degree of Decentralization. There are two specific advantages of decentralized management detailed in the model - delegation of decision making authority and motivation for operating managers. It was also pointed out in the model that:

(1) By decentralization, top management acknowledges its inability to handle the number of decisions which must

be made in the organization, and

(2) the primary means of assuring top management control in the decentralized organization is through responsibility-center management.

CNAP is decentralized operationally but not financially. Operational control passes from CNAP through various subordinate commands, with the squadron Commanding Officer directly responsible to either his Air Wing Commander or Functional Wing Commander. This chain delegates a portion of the operational decision making to a point below the Type Commander. Conversely, decision making on financial matter rests with CNAP. CNAP receives and monitors all financial reports. As pointed out in Chapter III, the responsibility for receiving and monitoring the 144 OFC-01 BORs rests with one Staff position. The centralized financial management of OFC-01 funds does not adhere to the responsibility-center management concepts developed in the model.

(2) Budgetary Control. As a centralized financial management system, OFC-01 budgetary control corresponds to many of the budgetary control characteristics of the model. The model emphasizes budgetary control as one of the principle steps in the management control process. Budgetary control characteristics included:

(1) incorporating the plans of the organization into a budget,

(2) measuring and comparing actual results with the budget,

(3) reviewing and investigating variances, and

(4) taking corrective action.

CNAP budgetary control is a key element in controlling OFC-01 funds. CNAP submits an annual OFC-01 budget based on the projected operating plans for the coming fiscal year and the historical cost data accumulated. Throughout the year the obligations and cost data are collected and compared to the projected budget figures for both obligations and costs. Variations are reviewed and OPTARs and flying hours are adjusted as required. CNAP evaluates squadron and aircraft performance on a monthly basis.

(3) Span of Control. In the model, span of control is described as the number of subordinates or activities which a manager or supervisor manages. It is pointed out that there is no precise formula for determining what constitutes an appropriate span of control.

The centralized nature of CNAP's control system has created a span of control of one position responsible for 144 OFC-01 OPTARS and several associated management reports. The position is also responsible for numerous other duties including assisting in maintaining the Flying Hour Cost Report system, preparing input data for the consolidated flying hour program cost submission to CNO, and validating the Flying Hour Cost Report output data.

(4) Flow of Spending Authority. As stated in the model, spending flow should go from the immediate superior commands to subordinate commands in order to give the immediate superior the "power of the purse" over its subordinate commands. The flow of OFC-01 funds does not follow such a pattern. OFC-01 funds are distributed directly from CNAP to the operational squadron. The Functional Wing Commanders and the Air Wing Commanders are left out of the financial chain. However, the Functional Wing Commander does receive an informational copy of each BOR and is tasked to monitor the financial management practices of their subordinate units.

(5) Internal Review. It is pointed out in the model that the management control system in large organizations should have an internal review staff to ensure that the control system is effective. The purpose of the internal review staff is to conduct independent examination and make reports on its findings in order to assist management in evlauating the function of systems and controls.

CNAP's internal review staff is Staff position Code 019A. As noted in Chapter III, the position is assigned auditing and foreign military sales duties as well as its internal review duties. The position's internal review duties include appraising the adequacy of internal controls and the quality of procedures for necessity, economy, and conformity with policies and principles established by higher authority, and recommending improvements to correct deficiencies noted in financial practices within the Resource Management Office and other Staff departments.

c. Constraints on the Control System

(1) Data Validity. As documented in the model, collecting valid data is a major problem in control systems. Some invalid data is submitted to cover errors, and some because the control system asks for information that is not available. The model also states that lack of attention to reported information by top management will result in hastily accumulated and unvalidated information from subordinate managers.

As noted in Chapter III, twenty percent of the OFC-01 BORs received by the Staff have either invalid data or are not received in the prescribed format. Lack of valid data effects cost per flying hour calculations, which, in turn, affect the number of OFC-01 dollars allocated.

They both effect future year OFC-01 fund and flying hour budgets.

(2) Degree of Control. The second constraint on control systems discussed in the model is the degree of control. It is pointed out that it is possible to have too few controls, which provides little guidance, or too many controls, which is very restrictive. CNAP's financial reports provide a great deal of information to CNAP but provide little indication that the squadron Commanding Officer is aware of his responsibilities for the effective and efficient use of resources. By issuing OPTARs directly to squadrons, CNAP retains control over flight operations funds on a grand scale, but deprives the Air Wing and Functional Wing Commanders a degree of their operational control over their subordinate squadrons.

2. Goals and Objectives

a. Goals

Goals are defined in the model as statements of planned or desired results. Only with clear, well defined goals can performance be directed, uncertainty reduced, and communications encouraged. It is not clear the CNAP's control system for OFC-01 funds establishes either clear or well defined goals. Although each squadron Commanding Officer is responsible for the effective and efficient use of resources, there are no stated measures of what is effective or efficient. Additionally, there are no formal written goals established for the Flying Hour Program.

Since there are no written or formally promulgated goals regarding the management of OFC-01 funds or the Flying Hour Program, there is no way of knowing if the goals of the Squadron Commanding Officer are consistent with the goals of CNAP and CNO. Also, referring to the lack

of feedback from CNAP to the squadron noted previously, Squadron Commanding Officers receive little or no formal information from CNAP regarding how their financial performance relates to the overall financial goals of CNAP.

CNAP's goals are expressed as constraints. By the very nature of OPTARs, the OFC-01 funds issued to a squadron are spending levels which may not be exceeded. At the same time, cost per hour is established on the CNO OP-20 as a budget figure that requires justification for significant variances.

From the squadron level, the manager (Squadron Commanding Officer) is not involved in setting goals. Squadrons do not make budget submissions for dollars or hours. Their only input is through obligations and reported hours flown.

At the CNAP level, the Type Commander has an input into the FHP goals. CNAP makes a yearly budget submission for OFC-01 funds and annually validates the CNO OP-20 cost per hour and projected flying hour figures.

b. Objectives

Objectives are defined as specific results stated in measurable terms. In other words, objectives measure output in some measurable way, usually in quantitative terms. It is very difficult to state organizational objectives in controlling OFC-01 funds. The basic problem is that the overall objectives of readiness and training are not directly expressed in quantitative terms. This makes the overall objectives in controlling OFC-01 funds unclear. The objectives used (e.g., specific number of hours flown, a specific cost per flying hour, an obligation rate) are input measures rather than output measures. Consequently, results (output) are never really measured.

3. Measurement Devices

The accounting and budgetary systems used by CNAP compare very favorably with the measurement devices described in the model. CNO, CINCPACFLT, and CNAP use the operating forces accounting system (NAVSO P-3013-2) and the CNO directed budgetary system for the three purposes identified in the model. Those purposes are:

(1) as a basis for coordinating and controlling the current activities of the organization,

(2) as a basis of evaluating operating performance, and

(3) as a basis for program evaluation.

The CNAP accounting and budgetary system exhibits the following characteristics identified in the model.

First, they apply to stated standards of performance (e.g., OPTARs, obligation rates, allocated flying hours, budgeted cost per flying hour).

Second, they tend to rely heavily on quantitative data.

Third, of the eight criterion Anthony and Herzlinger list for all control devices, as noted in Chapter II, CNAP accounting and budgetary systems meet all the criterion with the exception of giving more credence to surrogates than is warranted. Because of the lack of good output measures for training and readiness, obligations and cost per flying hour serve as surrogate measures of performance and are seen as the primary output of the control system.

Finally, the measures (e.g., OPTARs, obligations, cost per hour) tend to become ends in themselves. In a system of constrained budget dollars and flying hours, activities pay more attention to reporting spending or obligation levels than to the actual desired output.

4. Performance Monitoring and Appraisal

a. General

In the model it was shown that performance monitoring and appraisal provides information on the status or organizational activities and is a means to provide feedback to working managers in order to modify their behavior and to assign incentives and rewards. At the Type Commander level, the control system is specifically designed to monitor performance (e.g., obligations, hours flown, cost per hour) but does little to allow appraisal of that performance. As identified in Chapter II, the key elements in monitoring and appraising performance are an effective information system, the selection of an appropriate evaluation index, the establishment of a standard against which to measure the actual performance, and assignment of incentives or rewards.

b. Information Systems

The information system described in the model provides information to the decision maker, provides data rapidly and at appropriate intervals, avoids information overload, and presents data in an understandable form. The system is comprised of three main types of information - financial, routine, and a variety of non-routine, unsystematic information.

The information system used in the management control of OFC-01 funds consists of messages allocating OFC-01 funds, BORs, FHCRs, and a series of internal management reports used by CNAP Staff personnel. There is also a personal information link (telephone) between Staff personnel and the user squadrons.

The information system provides information to CNAP on a regular basis in a prescribed format. The information system also allows for non-routine inputs (e.g., OPTAR augmentation requests, OPTAR advance requests, requests for more flying hours). However, as noted in Chapter III, the current control system actually forces more information through the system than can be adequately processed. The information system also does not provide routine feedback to the operating squadron. With the exception of significant errors or omissions on BORs which must be corrected, the information system for the control of OFC-01 funds is strictly one way -- bottom up.

c. Evaluation Index

As pointed out in the model, choosing a suitable evaluation index is a subjective process. An index may be used as an aid in decision making as well as in evaluating performance (e.g., number of hours flown, obligations, obligation rates). An index that is satisfactory for one may not be suitable for the other. Although measured by the amount of OFC-01 funds obligated, the evaluation index for controlling OFC-01 funds is the cost per flying hour (CPH). Using such costs as an index has the two limitations pointed out in the model:

(1) depending on the validity of the input data, the costs are not entirely accurate measures of the resources used; and

(2) the CPH used as the standard is a projected figure based on historical data which does not account for the different operational phases (e.g., training, working/ready duty, deployment, standown) of aviation squadrons.

d. Standard of Performance

The standard of performance described in the model is often a budgeted cost and is based upon organizational objectives and budgets or upon past performance. The standard of performance selected in the control system for OFC-01 funds is the budgeted cost per flying hour (CPH) as stated on the CNO OP-20. The cost is developed at the CNO level (OP 51) based on three years of historical data, projected operational requirements and assets, and budget submissions from the Fleet Commanders.

e. Incentives and Awards

It is suggested in the model that incentives and awards are necessary for continued improved effectiveness by managers. Sibson (1976) points out in the model that practically all top management people in organizations with incentive plans believe they make a positive contribution (on the order of 10 percent) toward more effective work.

The CNAP control system for OFC-01 funds does not formally provide for a system of incentives and awards. As evidenced in the information system which is generally bottom-up, there is little, if any, feedback to the squadron. Additionally, since the funding and operational chains of command do not coincide, the squadron Commanding Officer's financial management performance is not necessarily appraised by his immediate superior, thereby providing no direct avenue for granting incentives or rewards.

D. SUMMARY

This chapter has compared the control system for OFC-01 funds used by CNAP to the control system model developed in the thesis. The comparison was made regarding the characteristics of control systems and four aspects of control in organizations. A review of the comparison between the control system for OFC-01 funds and the control system model developed in the thesis makes it possible to highlight the strengths and weaknesses of the CNAP control system for OFC-01 funds, to draw conclusions based on those strengths and weaknesses, and to make recommendations for improving the management control of Flight Operations funds. That review, the conclusions drawn, and the subsequent recommendations constitute the next chapter.

V. CONCLUSIONS AND RECOMMENDATIONS

A. GENERAL

The major premise of this thesis has been that control must support the decision making process. The primary objective has been to review the management control of OFC-01 funds at Commander, Naval Air Forces, Pacific (CNAP) and to make specific recommendations for improving the control process for OFC-01 funds and, in turn, for improving the decision making regarding the management of OFC-01 funds.

This chapter presents conclusions drawn from the comparison of the CNAP control system of OFC-01 funds with the control model identified in the thesis and presents specific recommendations for improving the management of OFC-01 funds. Finally, areas of future thesis topics are identified.

B. FIDUCIARY OR MANAGEMENT CONTROL?

A major conclusion of the thesis is that the CNAP budgetary control and financial reporting structure provides effective fiduciary accounting for OFC-01 funds. This fiduciary accounting system is concerned with the safeguarding of assets (e.g., dollars, flying hours) and the reliability of financial records. It is designed to assure that:

(1) transactions (obligations and flying hours) are executed in accordance with CNAP's specific authorization, and

(2) transactions are recorded as necessary to permit preparation of financial reports (Sawyer, 1981).

Anthony and Herzlinger write, "Fiduciary accounting is a way to keep track (monitor) of funds to ensure that they are spent honestly" (1980, p.53). At CNAP, this fiduciary accounting provides an excellent means of monitoring operating force compliance with financial and CNO flying hour guidance. It does not, however, assure effective management control. As identified in Chapter III, the major emphasis in management control is efficient and effective use of resources. Fiduciary accounting is only one part of a management control system.

The CNAP control system relies very heavily on fiduciary accounting. The CNAP Staff position (Code 01911) with primary responsibility for managing OFC-01 funds is tasked to "...monitor flight operations and closely administer funds in support of the Flying Hour Program insuring distribution of funds for a balanced program" (COMNAVAIRPACSTAFFINST 5440.2E, 1982, p.2-3-15). Top level Navy management further supports this fiduciary approach. CNO guidance relating to flight hour costs calls for the "...reporting of flight hour costs and related flying hours to permit monitoring of funds related to the Flying Hour Program, to allow for the development of flying hour cost factors, to insure uniformity of data reported and to insure conformance to Comptroller of the Navy financial reporting requirements" (OPNAVINST 7310.1D, 1980, p.1). As a consequence, CNAP's control system is very useful for monitoring cost and flying hour data. CNAP's highly centralized financial organization collects obligation and flying hour data directly from the operating units. The emphasis on monitoring operations is not without its costs, however. As noted in the following sections, the fiduciary aspects of controlling OFC-01 funds do little to ensure effective management control of Flight Operations funds.

C. COMPARISONS: STRENGTHS

The comparison of the CNAP control system for OFC-01 funds with the control system developed in the model makes it possible to identify several notable strengths and weaknesses in the control system for OFC-01 funds. This section and the next section discuss those strengths and weaknesses. The noted strengths are a sound base for the present fiduciary system and would serve as good starting points for a much more comprehensive management control system.

1. Specific Operational Objectives

The present system is very specific in stating its operational objectives. Expressed as constraints, OPTAR levels, flying hours, and cost per hour are levels not to be exceeded by the squadron without Type Commander approval.

2. Well Developed Information System

CNAP has a well developed information system for recording the progress of its subordinate activities. CNAP can be viewed as a highly centralized financial information processing system. The formal report structure (e.g., BOR, FHCR) and the informal oral and telegraphic communications among the various command levels in the CNAP administrative chain provide CNAP with much information. This allows CNAP to monitor the actions of each of the aviation units under its administrative command.

3. Strong Structural Organization

The control system for OFC-01 funds is part of a hierarchical financial structure which exists from the CNO level to the operating level. Additionally, the BOR and FHCR support a strong structural system of collecting,

storing, and transmitting information. Information (e.g., obligations, hours flown, gallons of fuel consumed) is collected at the squadron level, recorded in standardized records, and transmitted to CNAP.

4. Planned Activity Measures

The control system for OFC-01 funds has three separate activity measures - budgeted dollars, budgeted flight hours, and cost per hour. Both dollars and flight hours are established on a quarterly basis as targets/planning figures. Cost per hour is established in CNO and promulgated on the CNO OP-20. All three measures are compared at CNAP against actual obligations, hours flown, and cost per hour as reported by operating units.

5. Financial Structure

The OFC-01 funds control system is built around a financial structure -- NAVSO P-3013 accounting and OPNAV INSTRUCTION 7310.1D flying hour cost reporting. The accounting and budgetary systems based on this financial structure serve as very good measuring devices. They apply to stated standards of performance (e.g., CPH, OPTAR levels), tend to rely on quantitative data (e.g., obligations, hours flown, gallons of fuel consumed), and they meet most of the criterion Anthony and Herzlinger ascribe to control devices.

D. COMPARISONS: WEAKNESSES

Along with the noted strengths, the comparison of the CNAP control system for OFC-01 funds with the control system developed in the model highlights several notable weaknesses.

1. Lack of Squadron Participation

The control system does not provide for, or require, participation of the squadron Commander in setting goals and objectives or in the budget process. The result is a potential lack of goal congruence and incentive at the squadron level. Since there are no written or formally promulgated goals regarding the management of OPC-01 funds or the Flying Hour Program, there is no way of knowing if the goals of the Squadron Commanding Officer are consistent with the goals of CNAP and CNO. Additionally, Squadron Commanding Officers receive little or no formal information from CNAP regarding how their financial performance relates to the overall financial goals of CNAP. As pointed out in the model, involving the manager whose performance is being measured in the setting of goals not only promotes goal congruence but also reduces dysfunctional behavior because it reduces the chance that poorly understood standards will be set.

2. Lack of Feedback

There is very little operational feedback regarding financial matters provided to the operating squadrons. Although CNAP does notify squadrons if their BORs are late, there is little, if any, feedback regarding the quality of the information provided. This paucity of feedback prevents the squadron Commanding Officer from measuring squadron performance and from adjusting its performance to meet organizational goals.

3. Lack of Appraisal

There is a lack of formal CNAP performance appraisal (e.g., fitness report) of squadron Commanding Officers regarding their performance in managing OPTAR dollars,

flying hours, and flying hour costs. Without this CNAP input to performance appraisals, there is little incentive for the squadron Commanding Officer to review and validate his cost per hour information or to validate the reported fuel consumption data on the BOR. The validity of both items is necessary for a successful Flying Hour Program.

4. Flow of Funds

OFC-01 funds flow directly from CNAP to the operating squadrons - bypassing the Functional Wing Commanders and Air Wing Commanders. Although such a flow provides a very suitable method for monitoring resource usage, it does not provide the squadron immediate superior in command (ISIC) with the opportunity to measure the financial management performance of the squadron Commanding Officer, nor does it provide the operational control which comes with the "power of the purse" discussed in the model.

5. Span of Control

The highly centralized nature of CNAP's OFC-01 funds control system also contributes to another significant weakness - too large a span of control. Even with a judgemental decision of what constitutes an appropriate span of control, the requirement for one staff position to monitor, not to mention control, 144 separate OPTARS in the required time frames, along with other assigned duties, appears excessive. The time consumed just in record keeping impairs the financial decision making capability of the Staff.

6. Inadequate Standard of Performance

The present standard of performance - cost per hour (CPH) - is based primarily on historical data which does not take into account the different operational phases (e.g.,

training, working/ready duty, deployment, standdown) of individual aviation squadrons. Since there is no suitable output measure of OFC-01 funds performance such as quality of training or readiness, OFC-01 input cost can justifiably be used as a surrogate measure of OFC-01 funds performance. However, the present standard (based on three years past usage and projected operations) should be:

(1) more flexible in comparing the budgeted cost with actual performance, or

(2) the CPH as established on the CNO OP-20 Report should be regarded as a budget figure and not as a constraint, or

(3) the OP-20 budgeted costs should be divided into categories based on the operational phases of particular squadrons.

E. SUMMARY OF CONCLUSIONS

The CNAP control system for OFC-01 funds has been identified as an effective fiduciary control system. However, as a management control system it does not assure the level of information required by CNO in supporting the Navy Flying Hour Program nor does it insure effective utilization of resources. The control system strengths and weaknesses can be summarized as follows:

STRENGTHS

(1) The present system is very specific in stating its operational objectives.

(2) CNAP has a well developed information system.

(3) The Budget OPTAR Report and Flying Hour Cost Report support a strong structural organization.

(4) The CNAP control system has three separate planned activity measures.

(5) The control system is based on a financial structure.

WEAKNESSES

(1) Squadron Commanding Officers are not involved in setting goals and objectives in the budget process.

(2) There is no performance feedback to the squadron level.

(3) CNAP has no formal input to the squadron Commanding Officer's fitness report.

(4) The flow if OFC-01 funds does not follow the operational chain of command.

(5) The present span of control of the CNAP Staff impairs the decision making ability of the Staff.

(6) The CNO budgeted cost per hour (CPH) is an inadequate performance measure for individual squadrons.

F. RECOMMENDATIONS

1. General

The recommendations of this thesis are centered in two main areas:

(1) The control system should be used to hold the Squadron Commanding Officer responsible for the adequate utilization of OFC-01 funds, and

(2) management control of OFC-01 finds should be of as much importance as the fiduciary aspects of the control system.

Based on the comparisons between the control model and the CNAP control system for OFC-01 funds and conclusions drawn in the thesis, specific recommendations are presented. Although these recommendations may have application in other

funds management control areas (e.g., AFM), the recommendations are aimed at improving the decision making process in the management of OFC-01 funds at CNAP. Recommendations are presented in the following areas:

(1) flow of funds,

(2) performance appraisal,

(3) revised Budget OPTAR Report,

(4) performance measures,

(5) feedback to operating units, and

(6) internal review.

2. Flow of Funds

Allocate OFC-01 funds through the operational chain of command rather than directly from CNAP to the operating unit. As discussed previously, the direct flow of funds from CNAP to operating unit does provide a means for monitoring the obligation of OFC-01 funds, thereby enhancing fiduciary control of those funds. However, it does not provide the squadron's immediate superior in command (ISIC) with the opportunity to observe the financial management performance of the squadron Commanding Officer.

Allocation of OFC-01 funds through the chain of command would increase the awareness of all commands in the chain of the goals and objectives of the Navy Flying Hour Program (FHP). By directing funds through the chain of command, the ISIC would assume some of the responsibility for reviewing and validating flight operations funds obligations and flying hour information.

An additional benefit of ISIC involvement in the allocation and review process would be a decrease in the span of control of CNAP's staff position controlling OFC-01

funds. CNAP could hold the Air Wing or Functional Wing Commanders responsible for the validity of information submitted by their subordinate squadrons, thereby reducing CNAP's span of control from 144 to approximately 20 (6 carrier Air Wings, 6 Functional Wings, Fleet Marine Forces, Pacific, 6 CV/CVN, FASOTRAGRUPAC). In addition, much of the computational effort involved in summarizing flying hour information could be accomplished at the levels below CNAP. This would enhance increased management opportunities (e.g., variance analysis, trend analysis) by the Staff.

The most complex and far reaching of the thesis recommendations, changing the flow of OFC-01 funds could possibly require CINCPACFLT approval, although the author is not aware of any official regulation or policy that would preclude implementation. It is also possible that even without the actual change of "flow of funds," the administrative steps of the recommendation could be implemented at CNAP. Specifically, implementation would require:

(1) a quarterly grant from CNAP to the Functional/Air Wing Commanders with the OPTAR/Flying Hour grants of their assigned squadrons,

(2) a quarterly message from the Functional/Air Wing Commanders to their assigned squadrons stating the quarterly OPTAR/Flying Hour grants,

(3) copies of all BORs/FHCRs be sent to their applicable Functional/Air Wing Commander by reporting squadrons,

(4) that all OFC-01 fund and Flying Hour augmentation requests be sent to the applicable Functional/Air Wing Commander vice CNAP,

(5) that the responsibility for verifying squadron data validity rests with the Functional/Air Wing Commander's Staff,

(6) the possible addition of another billet to the Functional/Air Wing Staff, and

(7) summary Flying Hour Program information from the Functional/Air Wing Staffs for their assigned squadrons to CNAP.

3. Performance Appraisal

OFC-01 funds management performance should be a significant factor in the ISIC'S performance appraisal of Squadron Commanding Officers. Both Reily and Sheppard (1980) and Bozin (1981) recommend linking funds administration with funds (OFC-01, OFC-50) budget execution when evaluating the performance of funds administrators (e.g., Squadron Commanding Officers). Bozin's comments regarding the management of AFM funds are applicable to OFC-01 funds as well. He states,

> The ISIC normally writes the performance evaluation on the NAS or Squadron Commanding Officer, who is the primary fund manager. Without the ISIC directly involved in the flow of funds and monitoring of AFM funds performance, the chance for a substantive fitness report input based on AFM management is unlikely. Type Commanders should direct evaluators to specifically consider AFM funds management in conducting performance evaluations. This should also be done by Commanding Officers when evaluating their funds administrators (Comptrollers). The combination of these two recommendations would contribute significantly to an increased incentive to more efficiently and effectively manage AFM resources (1981, p.79).

Furthermore, direct evaluation of resource management performance provides incentive for the squadron Commanding Officer to carefully review and validate his cost per hour information and fuel consumption data as it is reported on the BOR or FHCR. In the long run, such steps will enable the CNO to present a more viable, defensible Flying Hour Program to Congress.

This recommendation could be easily implemented at the Functional and Air Wing Commander level. It would require a statement in the fitness reports of Squadron

Commanding Officers regarding their management of financial and Flying Hour resources. This recommendation relies on the Functional/Air Wing Commander being in the official flow of OFC-01 funds or in the administrative flow of all correspondence relating the financial and Flying Hour management of their assigned squadrons.

4. Revised Budget OPTAR Report (BOR)

The format of the Budget OPTAR Report (BOR) should be revised. The revision should be directed at making the squadron Commanding Officer more aware of his goals and performance, emphasizing the importance of the information required to support the FHP, and enhancing the management control of OFC-01 funds at CNAP.

As noted in Chapter III, the BOR is the primary management tool used in monitoring and managing the funds and resources allocated to support the FHP. The OFC-01 BOR reports three items of importance in the management of OFC-01 funds:

(1) cumulative obligations,

(2) hours flown during the month and cumulative flight hours flown fiscal year to date, and

(3) gallons of fuel consumed during the month.

This information is combined with information reported on the AFM (OFC-50) BOR to prepare the Flying Hour Cost Report (FHCR) which is submitted to CNO.

The present OFC-01 BOR, shown in Figure 3.2, is used by CNAP to measure squadron compliance with budgetary objectives. However, the OFC-01 BOR gives the squadron Commanding Officer little measure of his performance in relation to the CNO budgeted cost per hour.

It is recommended that the present OFC-01 BOR be modified as shown in Figures 5.1 and 5.2. The modification emphasizes the importance of FHP information, provides information to make the squadron Commanding Officer more aware of his goals and performance, and, because of its required cost per hour computation, brings immediate attention to any inaccuracies in the reported fuel consumption. The modification also provides a feedback loop between the Type Commander and squadron by requiring the squadron to justify significant variances between actual and budgeted cost per hour. This recommendation can be implemented at the CNAP level. It requires changing the instructions for Budget OPTAR Report preparation provided in COMNAVAIRPACINST 7303.11E, "Financial Management of Resources; instructions concerning."

```
R 192200Z DEC 82
  FROM: ATKRON TWO TWO
  TO:   FAADCPAC SAN DIEGO CA
  INFO: COMNAVAIRPAC SAN DIEGO CA
        COMLATWINGPAC LEMOORE CA
        COMCATWING FIFTEEN

UNCLAS//N07330//
CNAP PASS TO 019; CLWP PASS TO SUPPLY

FLT OPS BUDGET REPORT (OPC-01)

1. DEC/R09561/702E/57025A/FY83/000252

2. BLOCKS

(21)        (22)          (23)          (24)          (25)
7B      211,444.99           .00   211,444.99   AAEF
7F        2,010.00           .00     2,010.00   AAEF
9J          101.84           .00       101.84   AAEF
TOTAL   213,556.83           .00   213,556.83

29          007/3         008/3         009/3       TOTAL

30       26,737.81     31,186.73    132,513.44   190,437.98

31         510,000

32         11-9-82

33         11-9-82

3. FLYING HOUR COST DATA

(34)    (35)      (36)       (37)       (38)    (39)

AAEF      4          0       156,368     133     337

40          A          B           C           D

          JP4        0           0           0
          JP5        0           0         155,368
          AVGAS      0           0           0
          TOTAL      0           0         155,368

41          A          B           C           D
          AAEF       832         901         854

42 QUARTERLY CPH IS 8% ABOVE BUDGETED CPH DUE
INCREASED LOW LEVEL TRAINING IN DECEMBER.

43 17

44 LCDR. R.N. BURTON, AV 878-2535.
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Figure 5.1 REVISED OPC-01 BUDGET OPTAR REPORT (BOR).

1. Delete blocks 25, 26, 27, 28, 34, 35, and 36.

2. Add paragraph 3. - Flying Hour Cost Data.

3. Block 34: applicable aircraft TEC.

4. Block 35: the number of operating aircraft in squadron custody as of 2400 on the last day of the report month for the applicable TEC.

5. Block 36: the number of gallons of JP-4/AVGAS consumed during the report month for the applicable TEC.

6. Block 37: the number of gallons of JP-5 consumed during the report month for the applicable TEC.

7. Block 38: the flight hours flown during the report month plus any flight hour adjustments to previous reported flight hours for the applicable TEC.

8. Block 39: the actual cumulative flight hours accomplished for the FYTD by applicable TEC.

9. Block 40: same as Block 34 of present BOR.

10. Block 41: Cost per hour computation. Under column "A" enter applicable TEC. Under column "B" enter budgeted cost per hour. Under column "C" enter computed quarterly cost per hour. Subtract FYTD through previous quarter obligations and hours from current FYTD obligations and hours. Divide obligations for the quarter by hours flown for the quarter to obtain quarterly cost per hour. Under column "D" enter computed FYTD cost per hour. Divide FYTD obligations by FYTD cumulative flight hours to obtain FYTD cost per hour.

11. Block 42: Amplifying information. Remarks required for the following conditions:
    a. late BOR submission.
    b. quarterly cost per hour differs from the granted cost per hour by more than plus or minus 5 percent.

12. Block 43: Type Commander Data.

13. Block 44: Verifying official.

Figure 5.2 INSTRUCTIONS FOR REVISED OPC-01 BOR.

5. Performance Measures

The budgeted cost per hour standard should incorporate the different operational phases of aviation units. The cost per hour established in the CNO OP-20 is a budgeted figure based on the projected average fleetwide cost per hour for a given Type/Model/Series (TMS) aircraft. The CPH does not directly apply to the different phases of squadron operations. There are significant differences in the flying hours flown and OFC-01 fund obligations for an operating squadron between the four operational phases - training, working/ready duty, deployment, and standown.

As Type Commander, CNAP can use historical data to establish cost per hour levels that correlate to the operational phases of his assigned squadrons. Costs per hour based on the operational phases of the squadrons would be more realistic objectives for the squadron to achieve and would provide a viable standard to be used to measure the performance of squadron Commanding Officers.

This recommendation could be implemented at either the CNO (OP-51) level, or at the CNAP level. Since CPH is based primarily on historical data, implementation would require identifying those reported costs applicable to the various operational phases of assigned squadrons. Identification could be accomplished by coding the BOR/FHCR for the operational phases. Once the data base is established CNAP and the Squadron Commanding Officer would have a more realistic measure of squadron budgeted cost per hour execution.

6. Feedback to Operating Units

CNAP should provide, at least quarterly, information on OFC-01 funds management to all operating units and their ISIC'S. Management control would be enhanced by disseminating the following information down the chain of command:

(1) actual monthly/quarterly TMS cost per hour versus standard cost per hour,

(2) those squadrons/activities that consistently submit valid obligation, flying hour, and fuel consumption data within the prescribed time frames, and

(3) the number of units requesting OPTAR and/or flying hour augmentations, the number of each not granted, and the reasons for not granting the requests.

Feedback of this type would enhance the management control of OFC-01 funds in three specific ways. First, it tells the operating unit that attention is being paid to the information submitted in the BOR, FHCR, and augmentation requests. Second, by identifying those commands with good performance, it encourages the operating unit to submit valid information. Third, it provides the ISICs and unit commanders with CNAP's assessment of unit financial and flying hour management performance.

Implementation requires unilateral action by the Staff, CNAP. The information to be provided to the operating units and Functional/Air Wing Commanders is readily available and the reported CPH versus standard CPH is already reported in Staff internal management reports.

G. SUMMARY OF RECOMMENDATIONS

Based on the analysis of the thesis and the conclusions presented, the following recommendations to improve the management control of OFC-01 funds were made:

(1) Allocate OFC-01 funds through the operational chain of command.

(2) Fund administrators' performance evaluations should be linked with their OFC-01 funds budget execution.

(3) The format of the BOR should be revised.

(4) The budgeted cost per hour standard should incorporate the different operational phases of aviation units.

(5) CNAP should provide feedback on OFC-01 funds management to all operating units and their ISICs.

H. SUGGESTIONS FOR FUTURE STUDY

There are two areas related to Flight Operations (OFC-01) funds management and the Navy Flying Hour Program (FHP) that are suggested for future study. First, the relationship between budget execution and aircraft readiness should be examined. Second, the validity of cost per hour (CPH) as a measure of performance for the Flying Hour Program (FHP) is should be investigated.

The ultimate goal of any military organization is readiness. In aircraft squadrons, readiness is measured in a number of ways (e.g., percentage of trained crews available, training level of the available crews, airframes available). Cost per hour is a statistical measurement of the average cost per average hour of aircraft operation. The cost per hour measurement is an indicator of the cost to fly a given number of hours, whereas a readiness measurement

such as aircrew training readiness is also a function of flight time. "What is the cost of readiness?" is a question being asked by many sources including the Congress, the Office of Management and Budget, and Department of Defense itself. "What is the cost of aircraft readiness?" is an area of potential future research.

OFC-01 funds cost per hour (CPH) is a statistical figure based upon historical fund obligation data. The CPH is an indicator of the resources required to support a certain amount of flight time. The CPH is used by CNAP to measure the performance of reporting squadrons in meeting the budgeted cost per hour objectives established in the OP-20. As developed in this thesis, and the theses by Reily and Sheppard (1980) and Bozin (1982), direct aviation support funds management is principally fiduciary in nature. CPH compares resources expended to hours flown. The FHP, on the other hand, is established to support operational and training requirements. Operational or training 'readiness' is the desired result (e.g., hours flown for assigned mission, carrier qualifications). The FHP is budgeted and funded based on the historical cost per hour. While readiness is the desired result of the FHP, the actual measure of the program is cost per hour. There appears to be no correlation between CPH and the achievement or maintainence of a level of readiness. Thus, the validity of using cost per hour as the measure of performance for the Navy Flying Hour Program should be investigated.

I. SUMMARY

This thesis has examined the management control of OFC-01 funds at CNAP. An attempt has been make to provide information that will be useful in improving the management of those funds. As noted in the conclusions, the existing

control for OFC-01 funds provides filuciary control and is a sound basis for improved management control of OFC-01 funds. The recommendations presented provide an opportunity for:

(1) the Squadron Commanding Officers to compare squadron performance with the CNO budgeted cost per hour, and

(2) facilitating more accurate reporting of fuel consumption data.

The benefits of implementing the recommendations of the thesis would accrue to CNAP and the Navy as a whole.

APPENDIX A
THE FEDERAL BUDGET PROCESS

The federal budget process is composed of overlapping, interrelated cycles, and may be broken down into four distinct phases. These four phases are termed: (1) executive formulation and transmittal; (2) congressional enactment; (3) budget execution and control; and (4) review and audit. The first phase is further broken down into three stages: planning, programming, and budgeting. The four phases are described in this appendix. Except where noted, the material is drawn from the Practical Comptrollership Course, Student Text, of the Naval Postgraduate School, Second Edition, pp. A-3 to 27.

A. EXECUTIVE FORMULATION AND TRANSMITTAL

The executive formulation phase of the budget process provides the basis for deciding which programs an agency should pursue in an effort to achieve its overall goals and objectives. This process is extremely complex in an agency as large and diverse as the Department of Defense (DOD), especially given that agency's broad goal of providing for the national defense. In order to give some structure to the decision-making process within his Department, Robert McNamara, Secretary of Defense in the early 1960's, instituted the Planning, Programming, and Budgeting System (PPBS). Two valuable improvements to the decision-making process accrued with the advent of PPBS. First, focus was centered more on objectives and purposes, and the long-term alternative means for achieving them, rather than merely on the existing base and incremental improvements to it.

Second, the process of programming brought together planning and budgeting by defining a procedure for the equitable distribution of available resources among competing programs. Based on sound principles, the PPBS system was incorporated into other government agencies by the mid-1960's, but in 1971 it was "...officially abandoned by the federal government....Its basic ideas, however, live on...under other labels, in the federal agencies....(Indeed), the system continues essentially unchanged in the Department of Defense" (Anthony and Herzlinger, 1980, p.304).

The three phases of PPBS may be described as follows:

(1) PLANNING. The planning phase begins with the preparation and submission of the Joint Strategic Planning Document (JSPD) by the Joint Chiefs of Staff (JCS), which assesses the threat to United States security and develops force objectives to assure that security. The Secretary of Defense (SECDEF) uses the JSPD, along with Office of the Secretary of Defense (OSD) inputs to formulate his Defense Guidance for program development. This is issued to the three military departments and concludes the planning phase.

(2) PROGRAMMING. In the programming phase the Defense Guidance strategy is translated into program force structures in terms of resource requirements, including personnel, material, and money. This is done by each military department in the form of Program Objective Memoranda (POM). The Navy POM, for example, is the Secretary of the Navy's annual recommendation to SECDEF for the application of Department of the Navy (DON) resources. The JCS then issues a Joint Program Assessment Memorandum (JPAM), which gives JCS views on the adequacy of the composite force and resource levels presented in

the departmental POMs. SECDEF analyzes the JPAM and POMs and then develops a Program Decision Memorandum (PDM). This PDM forms the basis of his program recommendations to the President and is the final step of the programming phase.

(3) BUDGETING. This is the last step in the PPBS cycle. In this phase the programs developed and approved in the preceding stage are translated into annual funding requirements by their respective service. These requirements are forwarded to OSD where SECDEF makes his final choices of recommended programs within any appropriate budget planning constraints. The final OSD budget estimate is then forwarded to the Office of Management and Budget (OMB). After taking inputs for all departments and agencies, OMB prepares the President's budget for submission to Congress.

B. CONGRESSIONAL ENACTMENT

Following the executive formulation phase of the budget process is the Congressional enactment phase. This process is governed by the Congressional Budget and Impoundment Control Act of 1974. Although it contains several significant provisions, the one most relevant to this paper is its establishment of an orderly, structured Congressional budget enactment process. The Act basically provides for four phases to this process which are described below:

(1) BUDGET SUBMISSION. By November 10th the President submits to Congress a current services budget, which estimates the cost of continuing all current programs at their present level. Within 15 days after Congress convenes in January, the President submits his annual budget including the Defense budget as prepared in the executive formulation stage. Shortly thereafter,

Congressional committees begin hearings, including testimony for both proponents and opponents of the programs, in order to fully investigate and analyze the budget.

(2) AUTHORIZATION. In the budget enactment process Congress follows a two-step authorization and appropriation procedure. In this phase they complete the authorization step. This is the enactment of specific legislation authorizing an agency to pursue particular programs or activities. It does not provide funds, but normally sets maximum dollar amounts to be appropriated or maximum manpower force levels for specific programs. Authorization legislation for the uniformed military is under the primary cognizance of the House and Senate Armed Services Committees. During this phase Congress also adopts the First Concurrent Resolution, which is an estimate of gross revenue receipts and budget expenses. It establishes spending targets, the level of budget surplus or deficit and the level of public debt.

(3) APPROPRIATIONS. Once a program receives authorization, it acquires the funds for execution through the enactment of appropriations legislation. This process is steered by the House and Senate Appropriations Committees and, for the military services, their Defense Subcommittees. These appropriations are basically developed within the constraints of the previous authorization legislation.

(4) RECONCILIATION. In this phase Congress adopts the Second Concurrent Resolution, which either reaffirms or revises the First Concurrent Resolution and modifications thereto. If necessary, it reconciles any differences between the two resolutions and establishes budget

ceilings by functions and a floor for budget receipts. Their action results in the annual budget of the United States government.

C. BUDGET EXECUTION AND CONTROL

Once the budget is enacted by Congress it becomes the financial plan for operations of each specific agency. Normally appropriations and other budgetary resources are apportioned by the Director of OMB to the agencies on a quarterly basis. The main objective of this apportionment system is to ensure the effective and orderly use of the funds and preclude over-obligation.

D. REVIEW AND AUDIT

This final phase of the budget process runs both concurrently with the execution phase and following it. The individual agencies are responsible for ensuring that the obligations they incur are in accord with the appropriate legislation and other existing laws and procedures. Additionally, OMB and the General Accounting Office (GAO) conduct reviews and audits of the agencies.

APPENDIX B

AUTHORIZED OFC-01 FUND EXPENDITURES

(1) Fuel and lubricants for aircraft
(2) Aviators equipment - NAVAIR allowance list 00350H pertains
(3) Colored jerseys - utilized to identify squadron personnel used the launch and recovery of aircraft
(4) Consumable office supplies
(5) Aerial film and recording tape used in flight
(6) Line crew safety equipment
(7) Liquid/breathing oxygen and nitrogen
(8) maintenance/servicing costs at USAF bases (flight packets)
(9) Forms and publications (Navy stock system)
(10) Attorney's fees - in foreign countries with TYCOM approval
(11) Professional publications; including books and magazines
(12) Squadron plaques - for CO, XO and retention efforts (see COMNAVAIRPAC SAN DIEGO CA MSG 141701Z FEB 81)
(13) Incentive awards - as prescribed in SECNAVINST 1650.24 series

(EXTRACTED FROM NAVSO P-3013-2 APPENDIX 11)

APPENDIX C
NAVY FLYING HOUR PROGRAM

A. PURPOSE

The purpose of this appendix is to delineate the methodology utilized to produce the Navy Flying Hour Program (FHP).

B. BACKGROUND

The Flying Hour Program is the complex statement of all requirements, budgeted hours, associated costs, fuel usage and readiness milestones for Naval Aviation forces. The factors used to delineate the program have been developed by Fleet Commanders, in conjunction with the OPNAV Staff, through experience and ongoing review. These factors are designed to present from a macro point of view, the Navy FHP.

To provide a least common denominator for comparison and costing purposes, the FHP is expressed in terms of hours. Many of the factors represent averages and are not intended to depict fully the minute detail of the program.

It must be understood that, in the Navy, the Fleet Commander has full authority and responsibility for the execution of his assigned mission within allocated assets. To this end, the exhibits which comprise the FHP are guides to be utilized in the execution of the overall mission.

The bulk of the FHP (70%) is contained within CINCLANTFLT/CINCPACFLT programs. The Undergraduate Pilot Training Program (UPT) comprises 25% of the FHP and the remaining 5% is in the CINCUSNAVEUR, CNO, and CMC programs. Each of these major components will be discussed individually below.

C. FLEET PROGRAMS

The Fleet Commanders' FHP's are divided into three major categories:

(1) TACAIR/ASW, operational combat units;

(2) FLEET READINESS SQUADRONS, units which provide transition and refresher training;

(3) FLEET TACTICAL SUPPORT, units which support fleet air, sea and shore based missions. Fleet Marine Force (FMF) programs are included as part of the appropriate Fleet Commander's FHP.

D. TACAIR/ASW (SCHEDULE A)

1. FORCES

The key factor here is the force levels (UE) assigned to each fleet. FHP force levels are derived from the FYDP document known as the Aircraft Program Data File (APDF). To account for increasing/decreasing force levels (e.g., F-14/F-4) an averaging technique is employed to produce the number of aircraft to be operated, on the average, for each of the FYDP years.

2. CREW

For each type squadron a flight crew manning factor has been derived which determines the number of crews required for that organization to carry out its assigned mission. This factor is known as the CREW/SEAT Ratio (CSR).

3. HOURS

For each type aircraft, the Fleet Commander has determined, through experience, the hour milestones to maintain stated objectives. The "yardstick" is Primary Mission Readiness (PMR). PMR is those hours required to maintain the average flight crew qualified and current to perform the primary mission of the assigned aircraft; to

include all-weather/day/night/carrier operations as appropriate.

To provide guidelines for the squadron commander for the execution of his training program, each Fleet Commander publishes a Training and Readiness Manual (R/T Manual). These manuals are approved by CNO. They delineate those evolutions deemed essential to attainment and maintenance of the desired readiness level. These milestones are equated to a number of flying hours required for their completion. These numbers are averages of averages - accounting for the relative experience and skill levels of all assigned crews. These average numbers reflect deployed as well as non-deployed milestones.

It must be noted that there is no intent in the FHP or the R/T Manual to imply that every crew will be allocated the prescribed hours nor that they will achieve each of the R/T Manual evolutions every month, but that they will average that number of hours/evolutions (or less) over the entire year.

4. COMPUTATIONS

Force Levels (UE), Crew Seat Ratio (CSR), and PMR hours are combined as follows to compute the annual FHP requirement for each TACAIR/ASW squadron:

UE X CSR = CREWS CREWS X PMR HRS X MONTHS + STAFF HRS = RQRMNT

For example, the annual requirement for 8 squadrons of F-14's would be:

ACFT X CSR = CREWS 96 1.21 116.2

CREWS X PMR HRS X MONTHS + STAFF HRS = RQRMNT 116.2

23 12 1680 33,740

TACAIR/ASW Program Factors are:

ACFT	NAVY CSR	PMR HRS	ACFT	MARINE CSR	PMR HRS
A-6	1.15	25	A-4	1.40	23
EA-6B	1.50	25	A-6	1.25	25
A-7	1.42	23	AV-8	1.40	21
A-7E	1.42	25	EA-6	1.25	25
F-4	1.17	23	F-4	1.25	23
F-14	1.21	23	H-46	1.10	27
E-2	1.25	29	H-53	1.10	28
E-1	1.63	29	OV-10	1.20	23
RA-5C	1.25	20	KC-130	1.80	49
RF-8G	1.33	23	AH-1	1.10	27
H-2	2.30	29	UH-1	.85	28
S-3	1.50	32	RF-4B	1.40	23
P-3	1.38	52			

E. FLEET READINESS SQUADRONS (SCHEDULE B)

The hour requirement for FRS squadrons is a function of the number of students to be trained. Students are programmed by category, each category requiring a prescribed number of hours to train; resulting in the required hours.

1. CATEGORY

Category descriptions are as follows:

I A new pilot right out of UPT.

II A transition pilot; fleet experienced but not in this particul airplane, but not current.

III A refresher pilot; fleet experienced in this particular airpla but not current.

IV A refresher pilot with considerable experience in this type aircraft but not current (prospective CO, XO, Air Wing Command

V Special student (Ferry Pilot, Foreign Pilot, etc.).

2. HOURS

Syllabus hours plus all overhead hours required to completely train the student (chase flights, adversary flights, incomplete flights, reflys, maintenance test flights, weather aborts, etc.)

F. FLEET TACTICAL SUPPORT (FTS) (SCHEDULE C)

1. HOURS

Annual planning factors (utilization rate) are maintained for each aircraft assigned in the FTS role. These rates are updated by: (a) past year accomplishment, and (b) Fleet Commander input.

2. FORCES

Aircraft forces are assigned to FTS by OPNAV to meet projected support requirements.

3. COMPUTATION

UTILIZATION RATE X FORCES = HOURS REQUIRED

G. UNDERGRADUATE PILOT TRAINING (UPT)

Annual planning factors are maintained for each aircraft as a function of the Pilot Training Rate (PTR) mix of jet, prop, and helicopter pilots to be trained. Program requirements are computed by CNET and forwarded to CNO (OP-51C) for inclusion in the overall FHP.

H. STATE OF READINESS

Fiscal constraints over the past several years have necessitated reduction below the level of Primary Mission Readiness. OSD and CNO have accepted as a minimum 88% PMR

(TACAIR/ASW) for the long term. 86% of established Fleet Tactical Support requirements will support this reduced readiness level. Readiness Training Squadrons and UPT requirements must be met to provide a stable personnel situation and long term readiness through 100% training. To maintain deployed forces at an adequate level of readiness, they are allocated sufficient assets to support full PMR. Units in workup phase, preparatory to deployment, are also allocated full PMR hours. This procedure provides acceptable readiness for these forces, at the expense of non-deployed units.

I. CINCUSNAVEUR/CNO/CMC PROGRAMS

The NAVEUR, CNO, and CMC FHP's are primarily administrative support programs. Hour requirements are derived in the same manner as FTS (SCHEDULE C) requirements for CINCLANT/PACFLT.

APPENDIX D
GLOSSARY OF ACRONYMS

AFM	AVIATION FLEET MAINTENANCE
APF	ANNUAL PLANNING FIGURE
CNO	CHIEF OF NAVAL OPERATIONS
COMNAVAIRLANT	COMMANDER, NAVAL AIR FORCES, U.S. ATLANTIC FLEET
COMNAVAIRPAC	COMMANDER, NAVAL AIR FORCES, U.S. PACIFIC FLEET
CNAL	COMMANDER, NAVAL AIR FORCES, U.S. ATLANTIC FLEET
CNAP	COMMANDER, NAVAL AIR FORCES, U.S. PACIFIC FLEET
CPH	COST PER HOUR
FAADCPAC	FLEET ACCOUNTING AND DISBURSING CENTER PACIFIC
FASOTRAGRUPAC	FLEET AIR SPECIAL OPERATIONS TRAINING GROUP PACIFIC
FHCR	FLYING HOUR COST REPORT
FHP	FLYING HOUR PROGRAM
FYTD	FISCAL YEAR TO DATE
NAVCOMPT	COMPTROLLER OF THE NAVY
OB	OPERATING BUDGET
OFC	OPTAR FUNCTION CATEGORY
OFC-01 FUNDS	FLIGHT OPERATIONS FUNDS
OPNAV	OFFICE OF THE CHIEF OF NAVAL OPERATIONS
OPTAR	OPERATING TARGET
OP-20	CNO FLYING HOUR PROGRAM BUDGET DOCUMENT
OSD	OFFICE OF THE SECRETARY OF DEFENSE
O&MN	OPERATION AND MAINTENANCE, NAVY APPROPRIATION
POL	PETROLEUM, OIL AND LUBRICANTS
SECDEF	SECRETARY OF DEFENSE
TEC	TYPE EQUIPMENT CODE
TMS	TYPE/MODEL/SERIES
TYCOM	TYPE COMMANDER

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